



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

ADM

HDI



HL 2PSZ 2



*Bd. Sept. 1940*



HARVARD LAW SCHOOL  
LIBRARY

Received FEB 9 1932







B3

Aug 24 30

SIXTH  
ANNUAL REPORT  
OF THE  
RAILROAD COMMISSIONER,  
OF THE  
STATE OF VERMONT,  
TO THE  
GENERAL ASSEMBLY,  
1861.

---

RUTLAND:  
GEO. A. TUTTLE & CO., PRINTERS.  
1861.



c f

SIXTH  
ANNUAL REPORT  
OF THE  
RAILROAD COMMISSIONER,  
OF THE  
STATE OF VERMONT,  
TO THE  
GENERAL ASSEMBLY,  
1861.

---

Storage  
HE  
2771  
V5  
V47a  
1861

0

RUTLAND:  
GEO. A. TUTTLE & CO., PRINTERS,  
1861.



RAILROAD COMMISSIONER'S OFFICE, }  
RUTLAND, OCTOBER 15, 1861. }

TO THE SPEAKER OF THE HOUSE OF REPRESENTATIVES:

SIR:—I have the honor to transmit herewith,  
my report of the condition and management of the Railroads in  
the State for the year ending June 30, 1861, for the use of the  
General Assembly.

A. L. BROWN,  
Railroad Commissioner.

FEB 9 1932

2/9/32

# REPORT.

---

*To the General Assembly of the State of Vermont :*

In pursuance of "an act in addition to chapter twenty-six of the Compiled Statutes, in relation to railroads" approved November 16, 1855 ; and "an act relating to the duties and appointment of the railroad commissioner," approved November 18, 1856 ; the railroad commissioner respectfully submits the following report of the condition and management of the railroads in the state, for the year ending June 30, 1861.

I have followed the same plan in my examination of the railroads, the current year, which was adopted the previous year ; but giving more particular attention to the condition of bridges.

It is on the bridge that the greatest risk of both life and property is incurred. This risk is greatly increased by the passage of trains at high speed — a risk which is not fully estimated by some of the managers of our railroads.

The difference of strain on a bridge under a slow rate of speed, and that produced by the engine and load under a high rate of speed, is so considerable as to become important to the safety of the passenger and to the durability of the structure.

While some superintendents seem wholly to disregard this fact ; others consider it of sufficient consequence in the economical and safe management of their road, to limit the time of passing the bridges, and rigidly to enforce the order.

Enginemen are exceedingly unwilling to "slack up" as they approach a bridge, and will not do so except from fear of the penalty.

Good economy in the management of railroads, if it could be made an element in the management, would soon lead, not only to lessen the speed on bridges, but on every other portion

of the track. But the manager says, how can we satisfy the public, to be content with a reasonable speed of the train? The public will growl and perhaps "swear" if the train does not move with lightning speed. The remedy is at hand — fix a reasonable tariff of fare for a medium rate of speed, and fix another tariff of fare which shall give an equivalent for the increased cost of a high rate of speed with the increase of risk, and this inexorable public will soon give the preference to the medium rate of speed. Reasoning alone will not soon convince an unreasonable public, something more tangible is needed — something that can be counted.

This may seem to be a digression, but the matter is an important one, in which stockholders and bondholders have an interest.

The relative hazard, due to bridges on the railroads in the state, being mostly built of wood, and wood in combination with iron rods, (as in the Howe and McCollum plans,) has led me to a more careful examination of these structures. And in these examinations I have found that a knowledge of the principles of construction of bridges is not all that is needed to decide the question of security; the knowledge derived from experience, the very school of safety, becomes of very great importance. Experience, as railroad men know, has often put theory far in the background.

A considerable number of bridges are built after the pattern of a bridge known as the "Burr bridge." They are built of pine timber of good quality, and the workmanship is good. This kind of bridge answers very well for highway bridges, and even of long span. The railroad bridge of this pattern sustains a passing train with but slight deflection; they are in fact very stiff. The great objection to these structures is the large dimension of the timbers necessary (or supposed to be necessary) to give the requisite strength. The weight of the bridge is consequently greatly increased, and thus constituting a serious objection to their use. The principal objection, however, is the liability of large timbers, in particular positions, to rapid decay. Among the parts most likely to decay are the posts which sustain the braces and counter braces, and

which also supports the chords in their proper position. These posts, upon examination, are found to be decaying, and the safety of the structure is thus endangered. Although for the present these bridges seem to be safe, I believe it wise to guard against coming danger, which may come sooner than anticipated. I have, therefore, recommended the use of rods of sufficient dimensions to sustain the strain (extension) depending upon these posts. Measures have already been taken in some of these bridges to guard against accident. The Georgia bridge, built on this plan, it has been found necessary to rebuild in consequence of the decay of its timbers.

The cause of the decay of these posts may, perhaps, be traced to their position, being perpendicular, and the lower end exposed to the action of the vapor in the direction of the pores of the wood, and sufficient moisture thereby absorbed to produce the decay, which seems to be in the direction of the fibers and pores. The decay seems, in some degree at least, to depend upon the position of the timber, as the horizontal timbers, so far as I have examined, appear to be entirely sound, although equally exposed to the action of the moisture.

These posts, I believe, would have been preserved from decay, if they had been bored through their whole length with an auger of two and one-half or three inches in diameter, thus making a passage through which the air could freely circulate.

The Burr bridges are principally on the Vermont Central Railroad. There is one over White River, on the Passumpsic & Connecticut Rivers Railroad, very much in the same condition as described above, which has been made safe for the present by rods secured to the bottom chord and passing through the arched beams on both sides of the truss.

A new double lattice bridge has been built, since my last report, on the Vermont Central Railroad, north of the Northfield station, and is a substantial structure; one short bridge, somewhat decayed, is to be rebuilt without unnecessary delay; another, a deck bridge, was being repaired at the time of my examination, which needed new track stringers.

A new Howe bridge has been erected within the year in Rockingham, on the Rutland & Burlington Railroad, to supply



the place of one which was broken down by a freight train running off the track. The timbers of the bridge were found to be sound. The bridge over Cold river in Clarendon, on the same road, will soon require to be rebuilt; it is now supported by trestles, and when I examined it in June it seemed to be safe for the present. The bridge over the road and stream south of Cuttingsville, though regarded as safe upon my examination, would be rendered more rigid and stiff by the addition of some new timbers. The remaining bridges on this road are in a safe condition.

Two of the four bridges on the Rutland & Washington Railroad, mentioned in my last report as requiring to be rebuilt, have been taken down and substantial bridges built in their places. The bridge next south of Poultney station also needs to be rebuilt. This bridge was originally a single span, but a pier has been built under the centre, thus adding to its security; diagonal rods have also been added, from the top to the bottom chords, to give greater strength to the truss; but the posts and chords are so much decayed as to make it necessary to rebuild it without much longer delay. I was on the bridge in August, when an engine, under considerable speed, ran across it, and without causing any considerable deflection, and showing a greater degree of stiffness than would have been supposed from the decayed state of the timbers.

The remaining bridges on the Western Vermont Railroad, with the exception of one over Mill river in Clarendon, one next south of Wallingford station, over Otter Creek, and one in Arlington, to each of which allusion was made in the last report, have been rebuilt. The new bridges, with a single exception, are subject to the same objection mentioned in the last report — putting in one-half old floor timbers, which had been used some nine years, and constantly exposed to the weather.

The bridge in Wallingford ought to be rebuilt, to afford some additional security to passing trains. It now consists of stringers resting on trestles, and sufficiently strong to bear up the trains if no accident occurs; but should a train run off the track, or other accident occur on this bridge, which is not

impossible, there is not the barrier afforded by the floor timbers and side trusses, to prevent the train from landing in the creek.

All the bridges on this road remain uncovered, and are necessarily exposed to rapid decay. I here suggest the inquiry, whether the Trustees, in the faithful discharge of their trust, should not appropriate a portion of the funds derived from the rent of the road, in covering these bridges, and thus reasonably insure their durability, and thereby also promoting the interest of the bondholders in the road? Would not the chancellor, upon due application, order them to do this? The parties in interest in this trust estate, have no present power to control the appropriation for such purpose in any convenient and expeditious way.

I have been a little perplexed in my efforts to obtain definite information in relation to the Southern Vermont railroad, which extends only through the town of Pownal in Bennington County. The original corporation have no books, and never had any which show the length of the road, its cost, or any other details relating to it. In short the corporation seems to have been a kind of machine to build the road; made up of presidents and directors, without either any present or contingent interests in the matter. There were subscribers to the stock, who neither paid, nor expected to pay their subscriptions, or have ever been called upon to pay them. The contractors took the whole matter upon their own risk—built the road, leased it perpetually to the Troy & Boston Railroad Company for a rent of twelve thousand dollars a year, and subsequently sold all their interest to the State of Massachusetts for \$200,000, by virtue of a law passed at the last session of the Legislature of this State. The whole expense, probably, of building the road did not exceed one hundred thousand dollars. The road bed and track were in good condition at the time of my examination.

On this road are four bridges over the Hoosic river, built some three years since, neither of which seemed, to me, sufficient to afford the security which the public have a right to require. The form of the truss shows a new experiment in bridge building. The form is alluded to in a work on bridge

construction by Herman Haupt, a civil engineer of some note. Tension rods, diagonal rods and arch beams, I think, must have been added after the timbers of the truss had been put together, to guard against the structure falling, from its own weight. The very clumsy manner in which the work was done on these bridges, probably contributed to their weakness. The work was evidently done with a principal view to cheapness.

On inquiring who designed and built these bridges, I was a little surprised to learn that they were designed by the author of the work above mentioned, and built under his direction. One of these bridges, the first above North Pownal, in June last, yielded under the weight of a passing train, which barely escaped going into the river. The bridge was shored up with trestles, and is now probably the strongest of the four.

I immediately called the attention of the Superintendent of the Troy & Boston Railroad, to the condition of these bridges, who informed me that they were getting out timber for the purpose of rebuilding two of them. He also said that the lessees had refused to accept of these bridges when they took the lease of the road.

If the railroad commissioner had been invested with the authority, the condition of these bridges would have called for its exercise, in immediately causing such repairs as should insure safety to the traveller, until these structures could be replaced with more substantial bridges.

The bridges on the Vermont Valley Railroad are considered in such condition as to afford the requisite security to the passenger and to the freight.

The remaining bridges (one having been before alluded to,) on the Connecticut and Passumpsic Rivers Railroad, are in good condition.

The bridges on the Atlantic & St. Lawrence Railroad are in excellent condition. Two of the shorter bridges are iron girder, (iron plates rivetted together in the same way as the tubular bridges,) the remaining short span bridges are the Howe truss, lately built—the remaining bridges of longer span, are three new bridges of the McCollam pattern, substantially

built, and two Howe bridges, also substantially built and in good repair.

The bridges on the Rutland & Whitehall railroad are in such condition as to afford reasonable security. The one over Poultney river is a Howe bridge; to the others I am not able to assign any known name — they were built with reference to economy, and cost, probably, about as much as better structures.

The road bed, on all the roads in the state, is mainly in good condition. There are a few places, on high embankments, which need repairs. The sides have been washed down with the rains to such an extent as to leave the top scarcely wider than the length of the ties, and thus increasing the risk of accident. Where this condition of the embankment occurs on a curve, the risk is considerably increased. In such cases the top of the embankment should not be less than fourteen feet.

The Western Vermont railroad shows a decided improvement, since last year, in the renewal of ties, though a wide margin is left for another season.

Some improvement has also been made on this road in the renewal and repairs of rails, though these repairs and renewals make but a small proportion of what ought to have been done on this road. Much of the remainder is in bad condition.

The iron on the Rutland & Whitehall railroad is much worn at the joints, and shows but little evidence of recent repairs or renewals.

The iron on some portions of the Rutland & Washington railroad is in fair condition, while on other portions repairs are much needed. Some repairs have been made, but not by any means to the extent which true economy would dictate. This statement applies, particularly, to the part of the road from Castleton to Poultney.

The iron on the Rutland & Burlington railroad is much of it in good condition, though not through its entire length; some parts of it need repairs.

The iron, also, on the Vermont & Canada and the Vermont Central railroads is, a large portion of it, in good condition.

The Connecticut & Passumpsic Rivers railroad shows the



iron in good condition, and this is in some measure due to the small number of trains run over it. This road runs a less number of trains daily than any other in the state.

The remarks on the iron of the Rutland & Burlington, the Vermont & Canada and the Vermont Central are equally applicable to the Atlantic & St. Lawrence and the Vermont Valley railroads.

The machines running upon all the roads, so far as I have been able to examine them, have been generally found in good condition.

I have been gratified with the care exhibited on the part of the managers of the railroads, for the security of the passengers; and also with the prompt and courteous attention of conductors, and other employees, to all reasonable requests of passengers.

A good degree of care is shown in the police regulations of the roads, in case of accident, in guarding against danger from collision. And if these regulations are rigidly enforced, no accident would occur from such cause.

Section men are required to pass over their whole section at least every day; and if inquired of, whether they always do this, the answer is *always* in the affirmative. Yet it may be reasonably doubted whether this duty is always strictly performed. There might be improvement if the road-master was required, frequently, to *walk* over his whole division. I *know* that the condition of the track can be better ascertained on foot, than in the cars.

Improvement is making steadily, if not rapidly, in the construction of passenger cars — improvement in the methods of lighting and ventilation. The comfort of the passenger has been greatly promoted by the introduction of sleeping cars for night trains.

Gas has been used for lighting cars; and this must be a great improvement upon the old method, if the experiment shall prove successful. I have seen a car manufactured in the shops of one of the roads of the state, and designed to be lighted with gas, and which will compete in excellency of workmanship, and in comfort, with any car I have ever seen.

With the talent and ingenuity displayed in furnishing light to banish darkness — and light almost equal to the light of the sun — I see not why Kerosene may not be introduced into the cars instead of whale oil or candles, a more cleanly article, if not less offensive to sensitive nasal organs.

I alluded to the condition of the heavy masonry of the bridges on the Vermont Central railroad in my last report. The frost of the last winter continued its slow but certain and resistless operation upon these heavy granite walls, clearly indicating that its power cannot be controlled by iron rods. It has become necessary to remove the earth from one of these abutments the past season, to preserve it from destruction. A similar remedy probably must be applied to nearly all of the abutments of the same form on this road, at some period more or less distant. These abutments are of the U form, the walls being at right angles with the face of the abutment. In abutments of great height the T form is the best and generally of the least cost.

The Passumpsic and Connecticut Rivers railroad company are continuing the work upon the extension of their road beyond its present termination in Barton. But neither the report of last year or the current year furnish any information of the amount of money expended on this extension, though both years such expense was required to be reported.

The work on the new location of the road between Winooski bridge and the terminus of the Rutland & Burlington railroad, under the law of 1859 on that matter, is in progress, but not yet completed, but trains are run over it occasionally.

A tunnel has been built on this part of the road through a bank of sand of some three hundred feet in length. The work is built of brick; the walls are four feet in thickness, and the arch is two feet thick; the approaches at each end are built of hammer-dressed stone. The work appears to be well and substantially done.

This is the first tunnel known to have been built through loose sand; and the work does great credit to the engineer, Daniel C. Linsley, Esq., under whose superintendence it was constructed.

The amount of money expended on this work up to the 30th of June, 1861, has not been reported, though required to be so reported.

This change of line between the two points will greatly facilitate the connection of the Rutland & Burlington railroad with the Vermont & Canada and the Vermont Central railroads, and will remove some of the serious inconveniences to the transport of freight and passengers over the latter roads.

Essex Junction still remains and is likely still longer to remain, and the evils incident to the connection of three roads are still encountered, and the inconveniences caused by delay often occasion fault finding. Similar inconvenience also results from similar junctions of different roads at other points in the State.

The facilities of change of trains may be improved, and the evils incident to the delay at this station might be in some measure obviated by changing the site of the depot, and altering the position of the different tracks. A new and enlarged depot building would also be an improvement, tending to lessen the evils complained of at this station. These changes for the better the managers inform me they purpose to make.

By the law approved November 17, 1859, it was provided that all passengers passing over the road between Rouse's Point, or any intermediate station, and Burlington, should be carried without delay and without change of cars, except in case of accident or other casualty. It was also further provided "that all passengers passing from Burlington over any part of the line of said Vermont & Canada railroad, or over the Vermont Central railroad to Northfield, or to any intermediate station between Northfield and Burlington, and all passengers from Northfield, or from any intermediate station between Northfield and Burlington, to said Burlington, shall, whenever and so long as the Vermont & Canada railroad company, or any officer, corporation or person, claiming or holding through or under or in the right of the said Vermont & Canada railroad company, shall have the possession, control, or direction of the Vermont Central line, or the running of trains thereon, between said Northfield and Burlington, be carried without

change of cars, except in case of accident or casualty, and without unnecessary delay."

Passengers passing between Burlington and Rouse's Point on the daily trains running through between New York and Montreal, have been carried without change of cars; aside from this, the provisions above cited have not been complied with.

This fact is reported in obedience to the requirement of section 3 of "an act relating to the appointment and duties of the railroad commissioner," approved November 18, 1856.

Other than this, no "neglect or infringement of the laws for the regulation of railroads in this State by officers, employees, or agents of such roads," (except in cases hereafter alluded to) has come to my knowledge.

In my last report I took occasion to submit to the legislature the expediency of so amending the law relating to the reports of railroad corporations as to fix the termination of the year for which the reports are to be made, and also the time within which such reports should be returned. The experience of another year leads me again respectfully to call the attention of the legislature to the same subject.

Some months prior to the 30th of June last, in accordance with the power vested in the railroad commissioner by the law of 1855, I prescribed the form for the reports of the several railroad corporations, and the 30th day of June as the end of the year for which the report should be made, and also the 20th day of August as the time at which such reports should be made to the commissioner, for the purpose of insuring uniformity in the reports. In the month of May last I forwarded these blank forms to the several parties whose duty it was to make the reports. About the 10th of August my attention was called to some omissions in the printed forms. On the 12th of August I advised the officers of the corporation of the omissions with a request that they should be supplied.

The result has been that five reports have been made for the year ending 30th of June, 1861, and others for the year ending as follows: one 31st of December, 1860, one 31st of May, 1861, and two 31st of August, 1861. The different



times at which the several reports have been returned may be seen in another part of this report.

The effort of the commissioner to secure uniformity in the termination of the year is defeated, and comparison rendered exceedingly inconvenient.

It is, therefore, respectfully submitted, whether it is not better to fix this period by law than to leave it in the discretion of the commissioner, and to attach such a penalty as will insure obedience to the requisition.

The form requires a statement of the finances of the several corporations, trustees, &c., a statement of the salaries of Trustees, President, Superintendent, and Treasurer. How far compliance has been secured will appear from the several reports. One road reports a surplus of earnings over expenses, but it does not appear from the report what disposition has been made of this surplus.

In my last report the question was respectfully suggested whether it was not expedient to invest the railroad commissioner with power to order repairs in certain supposed cases, and if the order was neglected, to cause such repairs to be made. Such suggestion is again respectfully referred, with the reasons there offered, under the belief that cases now exist which call for the exercise of such power, and to which allusion has already been made.

The inquiry has often been made, if the railroads in this State cannot be made to pay dividends. The inquiry is easily made but not so easily answered. A rapid increase in the business of the roads cannot reasonably be expected, from which a proportionate increase of net profits could be realized. The only apparent way in which improvement in the nett profits can be looked for, must be in greater economy of management and the reduction of expenses. There has been improvement in both these respects, but not to such an extent as to admit of no further improvement.

There is in these particulars no place for legislative interposition; this is a matter which more immediately concerns stockholders and bondholders, and in which they have not concerned themselves as much heretofore as they ought to have done.

Experience in some of the States in the management of railroads, has taught the lesson that the payment of large and exorbitant salaries to officers does not always, necessarily, insure good management and the production of net profits.

Entrenchment is occasionally resorted to, but often begins at the wrong point. Cutting down the wages of section men, shop hands, enginemen, brakemen and firemen, men whose labor cannot be dispensed with, and whose compensation is never large, and but occasionally touching the salaries of Trustees, Presidents, Superintendents, Treasurers, &c., a proportionate reduction of which would show in the results.

If the different lines, for example, from Barton to the south line of the state could be placed under one direction, a very considerable sum might be saved in the item of expenses. I am not able to say, that such a change could be accomplished, but allude to it as an example to show the possibility of saving money.

Possibly there might be such a consolidation of officers as to make an essential saving in expense, without diminishing the efficiency in management.

These suggestions are made merely for the purpose of inducing inquiry.

The alignment of some of the curves on the Vermont & Canada and the Vermont Central railroads, was either originally inaccurately laid down, or which is the more probable, had become deranged by use for some twelve years, so as to cause an inconvenient side motion of the cars. The managers are wisely making a new alignment of all their curves, and also ascertaining the grades of their whole line. While doing this it has been recommended to them to flatten the ends of all their curves, (increasing the radius of curvature,) as an important improvement, making the entrance upon, and the departure from, the curve less abrupt and more easy.

Such a new arrangement of the curves would be a benefit to all the roads in the state; although, on no other road is the derangement as extensive as on those mentioned. The flattening of the curves from one hundred to three hundred feet in length at each end, would be a decided improvement.

The following is a list of the railroad corporations in this state required, by law, to make reports annually to the railroad commissioner, viz :

Atlantic & St. Lawrence road, leased to the Grand Trunk railroad company of Canada.

Passumpsic & Connecticut Rivers.

Rutland & Burlington — road in hands of trustees.

Rutland & Washington — road in the hands of trustees.

Rutland & Whitehall — road leased perpetually to the Saratoga & Washington railroad company in the state of New York.

Southern Vermont — road leased perpetually to the Troy & Boston railroad company in the state of New York, but owned by the state of Massachusetts.

Vermont Central — in the hands of receivers appointed by the court of chancery.

Vermont & Canada — road leased perpetually to the Vermont Central.

Vermont Valley — in hands of trustees.

Western Vermont — first mortgage foreclosed, and in the hands of trustees, who have leased the road to the Troy & Boston railroad company, of the state of New York.

Reports have been received from the railroad corporations, trustees and lessees, in the order and at the dates specified, as follows, viz :

Vermont & Massachusetts, August 16, 1860.

Western Vermont, August 20, 1860.

Vermont Central, August 28, 1860.

Vermont Valley, August 31, 1860.

Vermont & Canada, September 10, 1860.

Passumpsic & Connecticut Rivers, September 23, 1860.

Atlantic & St. Lawrence, September 30, 1860.

Rutland & Burlington, October 4, 1860.

Rutland & Whitehall, October 8, 1860.

Rutland & Washington, October 15, 1860.

Length of railroads in the state, including branches in operation :

	MILES,
Atlantic and St. Lawrence,.....	30.65
Passumpsic and Connecticut Rivers,.....	91
Rutland and Burlington, .....	119.54
Rutland and Washington, ... ..	29.8
Rutland and Whitehall,.....	8.81
Southern Vermont, (say) . . . . .	6.
Vermont and Canada, .....	55.5
Vermont Central, .....	119.
Vermont Valley, .....	23.7
Vermont and Massachusetts, .....	10.
Western Vermont,.....	59.
Total, .....	553
Whole length of side track,.....	53.17

The total cost of the 553 miles of railroad and equipment in the State, as furnished by the reports, am'ts to \$22,029,038 78  
 Average cost per mile, .....\$39,835 51  
 Interest upon the cost for one year would be, ..\$1,321,742 32

Some of the reports embrace in the cost of construction, interest, discount and salaries, paid out during the building of the road, and which go into the construction account in ascertaining the cost of the road—but this is not true of all. These items, there is reason to believe, amounting to more than \$1,000,000, are omitted in at least one report.

It was particularly requested that these items should be given in the reports. It was probably overlooked, being contained in a "note."

I have received from the officers of the several roads all the facilities requested in making my examinations ; and in these examinations have sometimes been accompanied by them.

I again renew my grateful acknowledgments to the officers and employees of the several roads for the uniformly courteous and gentlemanly attention which has been bestowed upon me.

## SUMMARY.

---

The following summary has been made up from the reports of the following roads, Passumpsic and Connecticut Rivers, Rutland and Burlington, Rutland and Washington, Vermont and Canada and Vermont Central, Vermont Valley, and Western Vermont—which amount in length to 497.54 miles. The Atlantic and St. Lawrence, Rutland and Whitehall and Southern Vermont not giving the data necessary, and the Vermont and Massachusetts, while the report is full, does not furnish the data from which accurate proportional results can be obtained for ten miles of road—these amounting to 55.46 miles.

**TABLE A.**

**STOCK AND DEBTS.**

Stock, ... ..	\$11,693,079 52
Debts, .....	11,971,719 17

**TABLE C.**

**EQUIPMENT.**

Total cost of road and equipment, .....	\$22,029,038 78
---	-----------------

**TABLE D.**

**CHARACTERISTICS OF ROAD.**

Length of road completed, .....	553 miles.
Length of branches, .....	8½ miles.

**CHARACTER AND LENGTH OF BRIDGING.**

Trestle bridging, .....	. . . . . feet. 8,227
Truss bridging, 50 feet span and under .....	. . . . . " 5,029
Truss do. from 50 to 100 feet span, ..	. . . . . " 1,754
Truss do. from 100 to 150 feet span, .....	. . . . . " 9,698
Truss do. 150 feet span and over, ..	. . . . . " 6,711
2 Draw bridges, .....	. . . . . " 339
<b>Totals, ..</b> .....	<b>feet 31,758</b>

## EQUIPMENT.

Number of locomotives owned by the companies on the 30th day of June, 1861,.....86

Number of cars owned by the companies, June 30, 1861 :

First class 8 wheel passenger cars,.....	61
Second class 8 wheel passenger cars,.....	2
Baggage, express and mail cars, ..	22
Covered freight and cattle 8 wheel cars,.....	1357
Platform 8 wheel cars, in good repair,.....	336
Other freight cars, .....	26
Gravel cars, .....	49

## TABLE E.

## BUSINESS OF THE YEAR.

Miles run by all trains, .....	1,593,704
Number of passengers carried in cars,.....	525,359
Number of miles traveled by passengers, (5 roads,)...	9,041,471
Average distance traveled by way passengers, (5 roads,)..	18.5 ms.
Number of tons freight, (on 5 roads,*)..	568,272

## TABLE G.

## EXPENSES.

Maintaining Roadway,.....	\$384,285	36
Repairs of Machinery, .....	250,262	93
Operating, .....	434,040	74
Total.....	\$1,068,589	03

## TABLE H.

## EARNINGS AND RECEIPTS.

From passengers, .....	\$503,366	64
From freight,.....	970,116	09
Expresses, .....	18,206	
Mails,.....	49,581	24
Rents,.....	15,877	54
Miscellaneous, .....	4,796	31
	\$1,5561,943	82

\* Passumpsic and Conn. Rivers road omitted in this statement as there is possibly an error in the report, which see.

## VALUE OF MATERIALS ON HAND.

Total, .....\$247,968 47

## TABLE I.

## ACCIDENTS.

Total number of persons killed, .....5

Total number of persons injured but not killed, .....6

One passenger killed, who was improperly on the top of a passenger car and was struck by a bridge.

It appears from this summary that the earnings are, \$1,561,943 82

Expenses, .....1,068,589 03

Net earnings, ... 493,354 79

Add materials on hand, .....247,968 47

Total amount of assets,.... \$741,323 26

Some of the reports account for a part of their net earnings, and others give no account of their disposition.

The reports for 1860 show the following results :

Earnings, .....\$1,554,244 55

Expenses,... .....1,197,213 87

Net earnings, .....387,030 68

Value of materials on hand,. .....211,299 61

Total amount of assets.. .....\$597,330 29

Increase of net earnings in favor of this year over the last, .....\$106,324 11

Decrease in expenses,.... .....130,624 84

Thus showing that the net earnings for the current year is wholly due to the decrease of expenses. The decrease in expenses exceeding the difference of net earnings by .....\$24,300 73

The gross earnings of last year exceed the gross earnings of the current year, .....\$22,500 73

The expenses of the current year are nearly 69 per cent. of the total earnings.

The expenses of last year, were nearly 76 per cent. of the total earnings.

These facts show a very manifest improvement in the decrease of expenses.

All of which is respectfully submitted,

A. L. BROWN, *Railroad Commissioner.*

# DOCUMENTS.

---

The following is the blank form distributed to the several Corporations for their reports; and it will be seen upon comparison how far the reports follows the prescribed form:

**ANNUAL REPORT OF THE——RAILROAD COMPANY, FOR THE YEAR  
ENDING JUNE 30, 1861.**

## TABLE A.

### STOCK AND DEBTS.

**NOTE.**—Under this head state the amount paid for interest, discount, &c., amount of funded debt, floating debt—rate of interest—amount of interest coupons due and unpaid.

## TABLE B.

### COST OF CONSTRUCTION.

Total cost of construction as per last report,  
Expended since last report, viz:  
For graduation and masonry,  
For bridges,  
For rails,  
For chairs, spikes and ties,  
For laying superstructure,  
For buildings and fixtures,

**NOTE.**—State, also, the progress of the work, cost of graduation, superstructure, and all incidental expense, on any extension or alteration of road, to June 30, 1861.

Also state the amount paid for interest, discount, &c., charged to construction account.

## TABLE C.

### EQUIPMENT.

Total cost of equipment by last report,  
Expended since last report,  
  
Total cost of road and equipment,



TABLE D.

## CHARACTERISTICS OF ROAD.

Length of road,  
 Length of road completed,  
 Length of branches,  
 Length of side tracks,  
 Weight of rail per yard,

NOTE.—State length of road, branches and side tracks within the State.

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structur's	No. of Spans.	Length of bridging, in feet.
Trestle bridging,			
Truss bridging, 50 feet span and under,			
Truss do., from 50 to 100 feet span,			
Truss do., from 100 to 150 ft span,			
Truss do., 150 feet span and over,			
Draw bridges,			
Total,			

Number of road crossings at grade,  
 Number of road crossings above and below grade,  
 Number of cross ties per mile,  
 Chairs, number per mile,  
 Whole number of switches on main track,

## GRADIENTS AND ALIGNMENT.

Level, number of miles,  
 Maximum grade,  
 Amount of straight line, miles,  
 Amount of curved lines, miles,  
 Maximum radius,  
 Minimum radius,  
 Sum of ascents going in one direction,  
 Sum of ascents going in opposite direction,  
 Height of termini and summit above tide water,

## BUILDINGS AND FIXTURES.

Passenger houses,  
 Freight houses,

Engine houses,  
 Repair shops,  
 Water stations,  
 Dwellings,  
 Wood sheds,  
 Turn tables,

Other buildings, as follows :

## EQUIPMENT.

Number of locomotives owned by the Company on the 30th day of June, 1861.

	Under 16 tons.	16 to 20.	20 to 25.	25 to 30.	30 tons and over.
In good repair, Requiring slight repairs, Requiring heavy repairs, Worn out,					

Number of cars owned by the company, June 30, 1861.

Firs class 8 wheel passenger cars in good repair,  
 First class 8 wheel passenger cars wanting repair,  
 Second class 8 wheel passenger cars in good repair,  
 Second class 8 wheel passenger cars wanting repair,  
 Baggage, express and mail cars in good repair,  
 Baggage, express and mail cars wanting repair,  
 Covered freight and 8 wheel cars, in good repair,  
 Covered freight and cattle 8 wheel cars, wanting repair,  
 Other freight cars,  
 Gravel cars,  
 Average weight of passenger cars,  
 Average weight of baggage cars,  
 Average weight of box cars,  
 Average weight of platform cars,

## TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,  
 Miles run by freight trains,

Miles run by gravel and construction trains,  
 Miles run by wood trains,  
 Number of through passengers carried in cars,  
 Number of way passengers,  
 Number of passengers having passes,  
 Number of miles traveled by way passengers,  
 Average distance traveled by way passengers,  
 Number of miles traveled by passengers having passes,  
 Number of tons of through freight,  
 Number of tons of way freight,  
 Number of tons of way freight carried 1 mile,  
 Number of tons of through freight moved towards market,  
 Number of tons of through freight moved from market,  
 Number of tons of way freight moved towards market,  
 Number of tons of way freight moved from market,  
 Average rate of speed of ordinary passenger trains,  
 Average rate of speed of express trains,  
 Average rate of speed of freight trains,  
 Rate of fare charged first class through passengers, per mile,  
 Rate of fare charged first class way passengers, per mile,  
 Rate of fare charged second class passengers, per mile,  
 Rate per ton per mile charged on 1st class through freight,  
 Rate per ton per mile charged on 2d class through freight,  
 Rate per ton per mile charged on 3d class through freight,  
 Rate per ton per mile charged on 4th class through freight,  
 Rate per ton per mile charged on 1st class way freight,  
 Rate per ton per mile charged on 2d class way freight,  
 Rate per ton per mile charged on 3d class way freight,  
 Rate per ton per mile charged on 4th class way freight,

## TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE,

For the year ending June 30, 1861.

Ordinary repairs of road bed and superstructure,  
 Extraordinary repairs of road bed,  
 Cost of new rails used in repairs,  
 Number and weight of chairs,  
 Weight of spikes,  
 Cost of repairs of rails,  
 Number of cross ties used for renewals,

Cost of same,  
 Cost of relaying rails and ties,  
 Insurance and taxes on real estate,  
 Repairs of bridges,  
 Repairs of stations,  
 Repairs of fences,  
 Repairs of masonry,

Total,

#### COST OF REPAIRS OF MACHINERY.

Repairs of engines and tender,  
 Repairs of passenger and baggage cars,  
 Repairs of freight cars,  
 Repairs of tools and machinery in shops,  
 Oil used about workshops,  
 Fuel,  
 Waste,

Other items in detail as follows :

Total,

#### TABLE G.

##### COST OF OPERATING THE ROAD.

For the year ending June 30, 1861.

Wood, including the cost of preparing the same,  
 Number of cords of wood used by locomotives,  
 Number of tons of coal used by locomotives,  
 Number of cords of wood used at stations,  
 Number of tons of coal used at stations,  
 Number of cords lost by fire,  
 Number of gallons of oil,  
 Number of pounds of waste,  
 Cost of oil and waste for engines and tenders,  
 Cost of oil and waste for passenger and baggage cars,  
 Cost of oil and waste for freight cars,  
 Loss and damage of goods,  
 Loss and damage of baggage,  
 Damages for injuries to persons,

Damages to property, including fire, and animals killed on road,  
 Office expenses and stationery,  
 Number of agents,  
 Number of clerks,  
 Labor, loading and unloading freight,  
 Porters and watchmen,  
 Switchmen,  
 Wood and water station attendance,  
 Conductors and baggagemen,  
 Brakemen,  
 Enginemen and firemen,  
 For salaries of Trustees, President, Directors, Secretaries, Treasurer and Superintendent,  
 For printing, stationery and office expenses,  
 For law expenses,  
 Other expenses in detail as follows :

Total,

#### RECAPITULATION OF EXPENSES.

Maintaining roadway,  
 Repairs of machinery,  
 Operating,  
 Proportion of expenses due to passenger business,  
 Proportion of expenses due to freight business,  
 Total,

#### TABLE H.

##### EARNINGS, RECEIPTS AND PAYMENTS.

##### *Earnings and receipts.*

From passengers,  
 From freight,  
 From other sources, viz :  
 Expresses,  
 Mails,  
 Rents,  
 Miscellaneous,

*Payments other than for construction.*

For transportatation expenses, viz :  
For passenger business,  
For freight business,  
For other business, and what,  
For interest on funded debt,  
For interest on floating debt,  
For dividends,  
For carried to surplus fund,  
For amount of surplus fund,

VALUE OF MATERIALS ON HAND.

Wood, cords of,  
Coal, tons of,  
Oil, gallons of,  
Waste, pounds of,  
Iron rails, tons of, old,  
Iron rails, tons of, new,  
Chairs, pounds of,  
Spikes, pounds of,  
Ties, number of,  
Iron and other metals, unwrought,  
Iron and other metals, worked and partly worked,  
Lumber,

Other items specified as follows :

COST OF TRANSPORTATION.

Actual cost of transporting freight per ton, per mile,  
Actual cost of transporting passengers per mile,

## DETAILS OF EARNINGS FOR THE YEAR ENDING JUNE 31, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.....						
Way passengers,.....						
Through freight, lbs.,.....						
Way freight,.....						
Express,.....						
Transport of mails,...						
Use of engines,.....						
Use of cars,.....						
Rent,.....						
Other earnings specified in detail as follow :.....						
Total,.....						

## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....						
Way passengers,.....						
Through freight, lbs. ....						
Way freight,.....						
Express,.....						
Transport of mails,.....						
Use of engines,.....						
Use of cars,.....						
Rent,.....						
Other earnings specified in detail as follows, .....						
Total,.....						



TABLE I.

## ACCIDENTS.

State the number of persons injured in life or limb, and the cause thereof, and whether passengers or persons employed.

State whether any such accidents have arisen from carelessness or negligence of any person in the employ of the corporation, and whether such person is retained in the service of the corporation.

	EMPLOYEES.		OTHERS.	
	Killed.	Injured.	Killed.	Injured.
Trains thrown from track,.....				
Struck by bridge, while on top of freight car,.....				
Run over while walking on track,.				
Injured at road crossing,.....				
Total,.....				

Total number of persons killed,

Total number of persons injured but not killed,

In addition to which must be given a statement of the date of each accident, the place where it occurred, the train, the cause and the extent of the injuries inflicted upon each person, and the name of such person.

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

Conductors of passenger trains,  
 Amount of compensation,  
 Conductors of freight trains,  
 Amount of compensation,  
 Conductors of wood and gravel trains,  
 Amount of compensation,  
 Master mechanics,  
 Amount of compensation,  
 Road masters,  
 Amount of compensation,

Men in repair shops,  
 Amount of compensation,  
     Enginemmen of passenger trains,  
 Amount of compensation,  
     Enginemmen of freight trains,  
 Amount of compensation,  
     Enginemmen of wood and gravel trains,  
 Amount of compensation,  
     Firemen,  
 Amount of compensation,  
     Baggagemen,  
 Amount of compensation,  
     Switchmen,  
 Amount of compensation,  
     Sectionmen, (foremen,)  
 Amount of compensation,  
     Section hands,  
 Amount of compensation,  
     Watchmen,  
 Amount of compensation,  
     Station agents,  
 Amount of compensation,  
     Other laborers,  
 Amount of compensation,  
     Clerks connected with passenger business,  
 Amount of compensation,  
     Clerks connected with freight business,  
 Amount of compensation,  
 Superintendent of bridges — salary,  
 Wood agent — salary,  
 Other agents — how employed — and the salary of each, as follows, viz :

The Treasurer is required to state the amount of surplus (if any) the amount of net earnings on 31st Aug., 186 —also the net earnings up to 30th June, 1861 —and to state amount of payments to surplus fund—payments of interest, coupons, on funded debt, and other disbursements in detail, so as to show the true condition of the finances of the company on the 30th day of June, 1861. Such statement may be in the form of a general account, and must be verified by the oath of the Treasurer.

STATE OF VERMONT, }  
COUNTY, SS. } day of 186

I, Treasurer of  
the Railroad  
Company, do solemnly swear that the above is a true statement  
of the condition of the finances of said Company, their Trustees,  
or assignees or lessees, on the 30th day of June, 186

Treasurer.  
Sworn before me, Justice of the Peace.

## OFFICERS OF THE COMPANY.

## SALARIES.

Trustees,  
President,  
Superintendent,  
Treasurer.

NOTE.—State the amount of each.

STATE OF VERMONT, }  
COUNTY, SS. }  
depose and say  
that the facts set forth and statements made in the foregoing re-  
port, which has been signed by are true and correct accord-  
ing to the best of knowledge, information and belief.

Signed,

Subscribed and sworn to before me this day of 18

The following is the copy of letter addressed to the several  
railroad companies, mentioned in the report :

STATE OF VERMONT,  
RAILROAD COMMISSIONER'S OFFICE, }  
RUTLAND, Aug. 12th, 1861. }

Dear Sir :—

Please add to your Report, under Table E, business of the  
year, "Number of through passengers carried 1 mile," and "Num-  
ber of tons of through freight carried 1 mile," which by mistake  
were not printed in the blank forms.

Yours truly,

A. L. BROWN,  
R. R. Comm.

# ANNUAL REPORT

OF THE ATLANTIC AND ST. LAWRENCE RAILROAD COMPANY FOR  
THE YEAR ENDING DECEMBER 31, 1860.

## TABLE A.

### STOCK AND DEBTS.

Capital stock—authorized by charter, .....	\$4,000,000
The amount paid in, ... ..	2,494,900
Funded debt, .....	3,479,000
Floating debt, .....	nothing
Interest six per cent.	

The coupons are paid by the lessees, and the money is on deposit for the payment of all coupons overdue and not presented for payment.

## TABLE B.

### COST OF CONSTRUCTION.

Total cost of construction as per last report,.....	\$6,697,995 64
Expended since last report, (year ending Dec. 31, '60).	90,209 09

Two-thirds of the road was built at a stipulated price per mile, consequently cannot be apportioned.

## TABLE C.

### EQUIPMENT.

Total cost of equipment as per last report,....	\$861,070 97
Expended since last report, (year ending Dec. 31, '60)	4,663 79
Total cost of road and equipment,.....	7,633,939 49

TABLE D.

## CHARACTERISTICS OF ROAD.

Length of road, (within State of Vermont).....	30½ miles
“ “ completed, “ .....	30½ “
“ “ branches, “ .....	none
“ “ side tracks, “ ....	about 1 1-5 miles
Weight of rail per yard,.....	63 lbs

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structur's	No. of Spans.	Length of bridging, in feet.
Pile bridging, with one draw,.....	1		1519
Truss bridging, 50 feet span and under,.	10	10	400
Truss do., from 50 to 100 feet span,....	2	2	120
Truss do. from 100 to 150 ft span,.....	14	14	1750
Truss do., 150 feet span and over,.....			
Stone arch bridges,.....	2	2	120
Total,.....	29	28	3909

NOTE.—In relation to the above bridges, there are on the line 16 iron bridges, 8 of which are 300 feet each in length, in spans of 75 feet; one over the Connecticut, one over Wild River and the other over Presumpscot River,—whole length of iron bridges 1510 feet.

Number of road crossings at grade,.....	63
“ “ above and below grade,.....	6
“ cross ties per mile,.....	2400
Chairs, number per mile,.....	about 600
Whole number of switches on main track,.....	about 100

## GRADIENTS AND ALIGNMENT.

Maximum grade,.....	60 feet
Maximum radius,.....	5730 feet
Minimum radius,.....	955 feet
Sum of ascents going in one direction; north over 5 feet grade,.....	65.89 miles
Sum of ascents going in opposite direction; south over 5 feet grade,.....	27.10 miles

The charter of the Atlantic and St. Lawrence Railroad within the State of Vermont extends from Connecticut River, at Bloomfield, to the boundary line in Norton. But the entire line from Portland to Montreal is worked in divisions, of which the point of junction is at Island Pond, in Brighton.

## BUILDINGS AND FIXTURES.

Passenger houses,.....	29
Freight houses, :.....	22
Engine houses,.....	8
Repair shops,..	6
Water Stations,.....	17
Dwellings,.....	2
Wood sheds,.....	26
Turn tables,.....	10
Other buildings as follows:	
Hotels,.....	2
Store houses on wharves in Portland for ocean and Boston	
Steamers,.....	10

## EQUIPMENT.

Number of locomotives owned by the Company.

	Under 16 tons.	16 to 20.	20 to 25.	25 to 30.	30 tons and over.
In good repair,.....			13	23	2
Requiring slight repairs, ....	1		2	3	
Requiring heavy repairs,.....					
Worn out,.....					

Number of cars owned by the company,.....	565
First class 8 wheel passenger cars in good repair, .....	17
Baggage, express and mail cars in good repair,.....	7
Covered freight and cattle 8 wheel cars, platform 8 wheel cars, and other freight cars,.....	541

TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	167.419
“ “ freight “ .....	422.047
“ “ gravel, construction and wood trains,....	179.874
Number of through and way passengers carried in cars,.	158.289½
Number of tons of through and way freight,.....	278.624
Average rate of speed of ordinary passenger trains, including stops, .....	23 miles
Average rate of speed of express trains, including stops, 26 “	
“ “ freight “ “ “ 13 “	
Rate of fare charged 1st class thro' passengers, per mile, 2¼ cents	
“ “ “ “ way “ “ 3 “	

TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE.

Books so kept cannot be answered in detail.

## COST OF REPAIRS OF MACHINERY.

Books so kept cannot be answered in detail.

TABLE G.

## COST OF OPERATING THE ROAD.

Books so kept answers cannot be given.

## RECAPITULATION OF EXPENSES.

Total, .. . \$529.816 55

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers, (year ending Dec. 31, 1860,).....	162.048	41
From freight                   "                   "                   "                   " .....	519.034	93
From other sources, viz :		
Expresses, (year ending Dec. 31, 1860,).....	4.669	47
Mails,                   "                   "                   " .....	14.900	00
Rents,                   "                   "                   " .....	5.695	58
Miscellaneous, "                   "                   " .....	796	14

*Payments other than for Construction.*

Dividends on stock not paid the last year ending June 30, 1860.

## VALUE OF MATERIALS ON HAND.

Stores.....	\$48.224	89
Fuel,.....	27.820	72

## COST OF TRANSPORTATION.

The statement of receipts, expenses and materials apply to the Portland division, extending from Island Pond to Portland.

## TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION

The employees of the company being employed on the two divisions of the road, one south of Island Pond, extending to Portland; the other north of Island Pond, extending to the boundary line and Montreal, no specific statement can be made under the inquiry, as applicable to the State of Vermont.

The earnings of the road are received by the lessees. The lessors have no interest in them while the rent is paid, and the accounts are so kept by the Grand Trunk Railway Company as not to admit of an answer to the above as contemplated.



The Directors of the Atlantic and St. Lawrence Railroad Company in presenting this their annual report beg leave to offer a copy of their statement made to you last year, which is as follows:

"The Directors of the Atlantic and St. Lawrence Railroad Company, in making their answers to the foregoing questions, beg to state that, their road being under lease to the Grand Trunk Railway Co. of Canada, as set forth in a former report, and being under the exclusive management of that company, their information upon which these statements are based, is derived partly from their own records and files, but principally from the officers and agents of that company at Portland, and from their books and accounts there kept; and though they are not personally cognizant of many of the facts, and state them from information thus derived, and not as wholly within their own knowledge, they have no doubt of the correctness of the statements made.

As the books of the company have been from the first, and are now kept in a method to conform to the requirements of another jurisdiction, very many of the questions in the tables cannot be answered; and such as are answered must apply to the whole line of road from Portland to the line of Vermont. Answers are, however, given as fully as the information in their possession will admit of. The same course, substantially, has been adopted by the directors in their reports to the Vermont authorities during the time their road has been under lease, and they trust that in this case it will be satisfactory. They have no doubt, if more explicit answers are required upon any matter, it will be readily furnished by the lessees of the road, so far as it is in their power so to do, intimation to that effect being given to them, or to the authorized agents or officers on the line."

P. BARNES,

*Vice Pres. At. & St. Law. R. R. Co.*

STATE OF MAINE, }  
CUMBERLAND COUNTY, ss. }

I, Phineas Barnes, depose and say that the facts set forth and statements made in the foregoing report, which has been signed by me, are true and correct according to the best of my knowledge, information and belief.

Signed,

P. BARNES.

Subscribed and sworn to before me this 14th day of September, 1861. JAMES T. McCOBB, *Justice of the Peace.*

## REPORT

OF THE PASSUMPSIC AND CONNECTICUT RIVERS RAILROAD COMPANY  
FOR THE YEAR ENDING MAY 31, 1861.

### TABLE A.

#### STOCK AND DEBTS.

Capital stock as per charter .....\$3,000,000

#### NUMBER OF SHARES.

Six per cent. guaranteed stock,.....49,200 shares.

“ “ “ preferred “ .....833,000 “

Stock not preferred, par value, \$100,.....398,200 “

1,280,400

Funded debt,.....\$800,000 00

Average rate of interest on funded debt, and paid

semi-annually, .....6 per cent.

Coupons due and not presented, .....\$2,478 00

TABLE B.

COST OF CONSTRUCTION.

For graduation, .....	\$655,989	35
For bridges and masonry, ...	185,252	47
For rails, chairs, spikes and cross-ties and laying superstructure, ....	467,054	59
For buildings and fixtures,.....	56,146	85
For land damages, &c,.....	110,085	72
For engineering.....	28,547	96
For locomotives,.....	71,328	76
For passenger cars, ....	40,595	00
For freight cars,.....	73,498	00
General expenses, .....	35,942	74
For fuel, .....	513	13
Interest,.....	58,637	38
Amount expended north of St. Johnsbury,.....	783,944	97
<b>Total, .....</b>	<b>\$2,567,486</b>	<b>92</b>

TABLE C.

EQUIPMENT.

Total cost of equipment as per last report, .....	\$193,421	76
New cars added equal to the deterioration.		

TABLE D.

CHARACTERISTICS OF THE ROAD.

Length of road, .....	110 miles.
“ “ “ completed.....	91 “
“ “ “ side track, 58 in number,.....	33,800 feet.
Weight of rail per yard,.....	.56 pounds.

CHARACTER AND LENGTH OF BRIDGING.

	No. of Struc- tures.	Number of Spans.	Length of bridging in feet.
Trestle Bridging,.....	6	1	150
Truss bridging, 50 feet span and under,..	12	1	350
Truss do., from 50 to 100 feet span, ...	1	1	80
Truss do., from 100 to 150 feet span,....	6	2	1168
Truss do., 150 feet span and over, . . .	2	3	356
Draw bridges, . . . . .			
Totals,.....	27	8	2104

Number of road crossings at grade,....	60
Number of road crossings above and below grade,.....	6
Number of cross ties per mile,.....	2000
Chairs, number per mile,.....	680
Whole number of switches on main track,.....	56

GRADIENTS AND ALIGNMENT.

Maximum grade,.....	52 $\frac{8}{10}$ feet.
---------------------	-------------------------

BUILDINGS AND FIXTURES.

Passenger houses,.....	3
Freight houses, .....	18
Engine houses,.....	3
Repair shops,.....	3
Water stations,.....	12
Dwellings,.....	7
Wood sheds,.....	16
Turn tables, .....	2
Other buildings, as follows :	
Car houses,.....	3
Building rented for store and occupied as general offices,....	1

## EQUIPMENT.

Number of locomotives owned by the Company on the 31st May, 1861.

	Under 16 tons.	16 to 20	20 to 25	25 to 30	30 tons and over.
In good repair, .....			4	2	
Requiring slight repair, ....			2		
Requiring heavy repairs, .....					
Worn out, ....					

Number of cars owned by the company, May 31st, 1861,...191

First class 8 wheel passenger cars in good repair, .... 4

First class 8 wheel passenger cars wanting repair,.....4

Baggage, express and mail cars in good repair,.....3

Baggage, express and mail cars wanting repair, ... 2

Covered freight and cattle 8 wheel cars, in good repair,...109

Covered freight and cattle 8 wheel cars wanting repair..... 15

Platform 8 wheel cars, in good repair,..... 37

Other freight cars,..... 17

Average weight of passenger cars,.....24,000 lbs.

Average weight of baggage cars,..... 17,000 lbs.

Average weight of box cars,.....14,000 lbs.

Average weight of platform cars, ..... 12,778 lbs.

TABLE E.

BUSINESS OF THE YEAR.

Miles run by passenger, freight, gravel and construction and wood trains,.....	118,219
Number of passengers carried in cars,.....	60,004
Number of tons of through freight,.....	55,601,176 lbs.
Lumber down Connecticut River,.....	4,946,333 ft.
Average rate of speed of ordinary passenger trains including stops,.....	23 miles per hour.
Average rate of speed of freight trains, including stops,....	10 miles per hour.
Rate of fare charged first class through passengers, per mile,.....	3 cents.
Rate of fare charged first class way passengers per mile,..	3½ cts.
Rate per ton per mile charged on 1st class through freight	4½ cts.
Rate per ton per mile charged on 2d class thro' freight,	3 <sup>85</sup> / <sub>100</sub> cts.
Rate per ton per mile charged on 3d class thro' freight,..	3 <sup>90</sup> / <sub>100</sub> cts.
Rate per ton per mile charged on 4th class thro' freight,..	2 <sup>3</sup> / <sub>4</sub> cts.
Rate per ton per mile charged on 1st, 2d, 3d and 4th class way freight, .....	5 cents.

TABLE F.

EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE.

For the year ending May 31st, 1861.

Fifty tons new rails used in repairs,.....	\$2965 63
Cost of repairs of rails,..	4463 42
7100 cross-ties.....	1065 00
Total cost of repairs of road,.....	\$25,566 13
Insurance and taxes on real estate, ....	1,154 83
Repairs of bridges,.....	32 04
Repairs of stations, and buildings,.....	1,285 88
Total,...	<u>\$28,038 88</u>

COST OF REPAIRS OF MACHINERY.

Total cost of repairs of machinery,.....	\$18,494 39
--	-------------

TABLE G.

## COST OF OPERATING THE ROAD.

For the year ending May 31st, 1861.

Wood, including cost of preparing the same, .....	\$8,463 26
Number of cords lost by fire, (500 cords,).....	1,000 00
Cost of oil and waste for engines, tenders, passenger, baggage and freight cars,.....	2,401 97
Loss and damage of goods and baggage,.....	1,381 53
Damages to property, including fire, and animals killed on road,.....	1,821 83
Number of agents at stations, .....	18
Number of clerks,.....	3
Labor, loading and unloading freight, station agents and wood and water station attendance,.....	6,358 67
Conductors, baggagemen, master transportation, ticket masters, brakemen, switchmen, watchmen, engine- men, firemen, clerks and carrying mails,...	13,150 28
For salaries of Treasurer, Superintendent and cashier, .....	3,300 00
For printing, stationery, and office expenses, postage, law expenses, and expenses as to joint business, and all other expenses not included in other accounts,...	6,662 10
Total, .....	<u>\$44,534 59</u>

## RECAPITULATION OF EXPENSES.

Maintaining Roadway,.....	\$28,038 38
Repairs of Machinery, .....	18,494 39
Operating, .....	44,534 59
Total,.....	<u>\$91,067 36</u>

TABLE H.

EARNINGS, RECEIPTS, AND PAYMENTS.

*Earnings and Receipts.*

From passengers, .....	\$71,601	23
From freight.....	100,856	71
Expresses,.....	2,000	00
Mails,.....	8,350	00
Rents,.....	942	33
Total,.....	\$183,750	27

*Payments other than for Construction.*

For transportation expenses, viz :

For passenger business,.....	\$7,543	18
For freight business,.....	13,740	82
For interest on funded debt,.....	48,000	00
For carried to surplus fund,.....	16,000	00
For amount of surplus fund,.....	70,000	00

VALUE OF MATERIALS ON HAND.

Wood, 8,079 cords,....	\$15,627	75
Coal, 9½ tons,.....	104	98
Oil, 168 gallons,.....	188	71
Waste, 1,407 pounds,.....	119	06
Iron rails, 90 <sup>320</sup> <sub>2000</sub> tons old,.....	1,957	20
Chairs, 8,852 <sup>4</sup> pounds,.....	309	82
Spikes, 1,500 pounds,.....	52	50
Ties, 2,249,.....	439	33
Iron and other metals, unwrought, 47,324 lbs.....	2,426	08
Iron and other metals, worked and partly worked, 63,380 lbs.....	6,736	09
Lumber, 203½ M.....	2,324	01
Other items specified as follows :	10,204	73
Total,.....	\$40,490	26



## DETAILS OF EARNINGS FOR THE YEAR ENDING MAY 31, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,....						
Way passengers,..						
Through freight, lbs.,....	4.041.994	5.064.936	5.879.051	7.545.994	6.193.321	5.611.106
Way freight,.....						
Express,.....	\$166 67	\$166 67	\$166 66	\$166 67	\$166 67	\$166 66
Transport of mails,.....	695 84	695 83	695 83	695 84	695 83	695 83
Use of engines,.....						
Use of cars,.....	Included in freight acc't.					
Rent,.....	78 52	78 52	78 52	78 53	78 53	78 53
Other earnings specified in detail as follows,.....						
Total,.....						

## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY	JUNE.
Through passengers,.....						
Way passengers,.....						
Through freight, lbs.. ....	3 308.206	2 662.889	5 389.256	4 123.671	3 634.496	4 146 276
Way freight,.....						
Express, .....	\$166 67	\$166 67	\$166 66	\$166 67	\$166 67	\$166 66
Transport of mails,.....	695 84	695 83	695 83	695 84	695 84	695 83
Use of engines,.....						
Use of cars,.....	Included in	freight acct.				
Rent,.....	78 53	78 53	78 53	78 53	78 53	78 53
Other earnings specified in detail as follows, .....						
Total,.....						

## TABLE I.

## ACCIDENTS.

1860. June 21st. William D. Carlton, switchman at Wells River station, was run over by freight train, while uncoupling cars ; died 5 hours after the accident.

## TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

1 Conductor of passenger trains,.....	\$660 00
3 Conductors of freight trains,.....	1,740 00
1 Master mechanic,.....	800 00
1 Road master,.....	780 00
25 men in repair shops,.....	10,796 12
2 engine men of passenger trains,.....	1,320 00
3 engine men of freight trains, ...	1,800 00
5 firemen, .....	1,800 50
2 Baggage men,.....	960 00
3 Switch men, .....	842 40
21 Section men, (foremen,).....	7,534 80
33 Section hands.....	8,791 80
3 Watchmen,.....	1,186 25
16 Station agents,.....	6,413 00
5 Other laborers,.....	1,560 00
3 Brakemen,.....	1,260 00
1 Cashier and accountant in General Office,.....	600 00
1 Ticket Master,,... ..	600 00
2 Clerks connected with freight business,.....	712 00
1 Wood agent,.....	\$2 per day.
1 General freight agent, .....	\$500 00

OFFICERS OF THE COMPANY.

HENRY KEYES, *President and Agent.*

JOSIAH STICKNEY, *Vice President, Boston.*

NATHANIEL P. LOVERING, *Treas., Boston.*

ELIJAH CLEVELAND, *Secretary, Coventry.*

SALARIES.

Treasurer, ..... \$1,500 00

STATE OF VERMONT, } I, Henry Keyes, President, depose  
 CALEDONIA COUNTY, ss. } and say that the facts set forth,  
 and statements made in the foregoing report, which has been  
 signed by me are true and correct according to the best of my  
 knowledge, information and belief.

Signed, HENRY KEYES, *President and Agent.*

Subscribed and sworn to before me this 17th day of September 1861.

HUBBARD HASTINGS, *Master in Chancery.*

# ANNUAL REPORT

## OF THE TRUSTEES OF THE RUTLAND & WASHINGTON RAILROAD COMPANY, FOR THE YEAR ENDING AUGUST 31, 1861.

---

### TABLE A.

#### STOCK AND DEBTS.

Capital stock, as by charter, .....\$950,000

### TABLE B.

#### COST OF CONSTRUCTION.

The Trustees never having had access to the books of the Corporation, have no information on this subject.

### TABLE C.

#### EQUIPMENT.

Total cost of the road and equipment,.....\$1,171,683 31

### TABLE D.

#### CHARACTERISTICS OF ROAD.

Length of road, completed,.....62½ miles.  
 Length of side track, . . . . .4 "  
 Weight of rail per yard,.....58 to 61 lbs.

CHARACTER AND LENGTH OF BRIDGING.

	No. of Structures.	Number of Spans.	Length of bridging in feet.
Trestle Bridging,.....			
Truss bridging, 50 feet span and under,..	7	7	320
Truss do., from 50 to 100 feet span, ...	9	9	559
Truss do., from 100 to 150 feet span,....	3	3	358
Truss do., 150 feet span and over, ... ..	8	12	1661
Draw bridges, . . . . .			
Totals,.....	27	31	2898

Number of crossings at grade, ... ..	58
Number of crossings above and below grade, .....	3
Number of cross-ties per mile, .....	2051
Chairs, number, per mile, .....	586
Whole number of switches on main track, .....	37

BUILDINGS AND FIXTURES.

Passenger houses, .. .	12
Freight houses, ... ..	12
Engine houses, . . . . .	4
Repair shops, . . . . .	2
Water stations,.....	7
Dwellings, . . . . .	2
Wood sheds,.....	7
Turn tables, .....	3

EQUIPMENT.

Number of locomotives owned by the Company on the 30th day of June, 1861.

	Under 16 tons.	16 to 20.	20 to 25.	25 to 30.	30 tons and over.
In good repair, .....		4	3		
Requiring slight repairs, .....		2			
Requiring heavy repairs,.....			1		
Worn out,.....					

Number of cars owned by the company, June 30th, 1861,	
First class 8 wheel passenger cars in good repair, .....	5
First class 8 wheel passenger cars wanting repair, .....	1
Baggage, express, and mail cars in good repair, .....	3
Covered freight and cattle 8 wheel cars, in good repair, .....	98
Covered freight and cattle 8 wheel cars, wanting repair, .....	12
Platform 8 wheel cars, in good repair, ..	58

## BUSINESS OF THE YEAR.

Miles run by passenger trains, .....	64,069
Miles runs by freight trains, .....	86,623
Miles run by gravel and construction trains, .....	1,644
Number of through and way passengers, .....	81,743
Number of miles traveled by passengers, .....	1,617,134
Average distance traveled by passengers, ...	about 19 2-3 miles.
Number of tons of way and through freight, .....	120,275
Number of tons of freight carried 1 mile, .....	1,699,322
Average rate of speed of ordinary passenger trains,	25 miles per hour.
Average rate of speed of express trains, .....	33 miles per hour.
Average rate of speed of freight trains, .....	12 miles per hour.
Rate of fare charged passengers per mile, ...	3 1-3 cents.
Rate per ton per mile charged on 1st class through freight,	3 cents.
Rate per ton per mile charged on 2d class through “	2 1-2 cents.
Rate per ton per mile charged on 3d class through “	2 cents.
Rate per ton per mile charged on 1st class way freight,	7 ½ cents.
Rate per ton per mile charged on 2d class way freight,	3 ¾ cents.

## TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE,

For the year ending August 31, 1861.

Repairs of road bed and superstructure, .....	\$20,627 81
Cost of new rails used in repairs, .....	2,330 36
Cost of repairs of rails, .....	2,074 96
10,690 cross-ties used for renewals, .....	2,854 37
Insurance and taxes on real estate, .....	1,436 69
Repairs of bridges, .....	4,051 35
Repairs of fences, .....	1,244 75
Repairs of road tools, &c., .....	1,144 02
Total, .....	<u>\$35,764 31</u>

## COST OF REPAIRS OF MACHINERY.

Repairs of engines and tenders, .....	\$7,172 00
Repairs of passenger and baggage cars, .....	2,761 56
Repairs of freight cars, .....	8,796 59
Repairs of tools and machinery in shops, .....	138 42
Oil used about workshops, .....	75 00
Waste, .....	37 25
Total, ... ..	<u>\$18,980 82</u>



## TABLE G.

## COST OF OPERATING THE ROAD.

For the year ending Aug. 31, 1861.

Wood, including cost of preparing the same, . . . . .	\$18,399 94
Number of gallons of oil, . . . . .	2898
Number of pounds of waste, . . . . .	8856
Cost of oil and waste for engines and tenders, . . . . .	1,704 40
Cost of oil and waste for passenger and baggage cars, . . . . .	135 90
Cost of oil and waste for freight cars, . . . . .	1,361 30
Loss and damage of goods, baggage, damages for injuries to persons, damages to property, includ- ing fire, and animals killed on road, . . . . .	1,199 32
Office expenses and stationery, . . . . .	673 99
Number of agents, 15, clerks, 4, . . . . .	10,039 73
Porters and watchmen, . . . . .	1,905 25
Switchmen and wood and water attendance, . . . . .	163 00
Conductors and baggagemen, . . . . .	3,504 07
Brakeman, . . . . .	2,020 16
Enginemen and firemen, . . . . .	6,444 05
For salaries of Trustees, President, Directors, Secre- taries, Treasurer and Superintendent, . . . . .	7,000 00
For law expenses, . . . . .	466 82
Total, . . . . .	<u>\$55,016 93</u>

## RECAPITULATION OF EXPENSES.

Maintaining Roadway, . . . . .	\$35,764 30
Repairs of Machinery, . . . . .	18,980 82
Operating, . . . . .	55,016 93
Total, . . . . .	<u>\$109,662 05</u>

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers, .....	\$50,094 89
From freight,.....	77,682 69
Expresses, ... ..	3,000 00
Mails,.....	6,250 00
Miscellaneous,.....	1,410 00

## VALUE OF MATERIALS ON HAND.

Wood, .....	6,977 83
Iron rails, .....	1,065 00
Chairs, .....	250 00
Iron and other metals, unwrought, ....	2,873 55
Lumber, .....	1,271 73

## DETAILS OF EARNINGS FOR THE YEAR ENDING AUG. 31, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.... }	3 964 54	4 932 07	7 455 69	5 558 53	4 184 63	3 391 70
Way passengers,.... }						
Through freight,.... }	3 524 45	4 091 37	10 454 55	12 870 09	10 435 19	5 710 80
Way freight,.... }						
Express,.....	250 00	250 00	250 00	250 00	250 00	250 00
Transport of mails,...	520 83	520 83	520 84	520 83	520 83	520 84
Use of engines,.....			620 00			
Use of cars,.....						
Rent,.....						
Other earnings specified in detail as follows,.....						
Total,.....	8 259 82	9 794 27	19 301 08	19 199 45	15 390 65	9 873 34

DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....	2,709 72	2,628 29	3,916 95	4,261 91	3,811 88	3,278 98
Way passengers,.....						
Through freight,.....	3,179 67	3,702 91	6,941 40	6,869 27	5,434 94	4,468 05
Way freight,.....						
Express, .....	250 00	250 00	250 00	250 00	250 00	250 00
Transport of mails,.....	520 83	520 83	520 84	520 83	520 83	520 84
Use of engines,.....	470 00	320 00				
Use of cars,.....						
Rent,.....						
Other earnings specified in detail as follows, .....						
Total,.....	7,130 22	7,422 03	11,629 19	11,902 01	10,017 65	8,517 87

TABLE I.

## ACCIDENTS.

No person injured, except one employee — occasioned by his being caught between engine and tender.

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

2 Conductors of passenger trains,.....	\$50 per mth.
2 Conductors of freight trains,.....	42 50 “
1 Master mechanic,.....	\$1000 a year.
1 Road master,.....	800 “ “
21 men in repair shops,.....	\$1 29 per day.
2 Engine men of passenger trains,.....	\$60 per mth.
2 Engine men of freight trains,.....	60 “
1 Engine men of wood and gravel trains,.....	45 “
6 Firemen,.....	30 “
2 Baggage men,.....	35 “
1 Switch man,.....	13 “
12 Section men, (foremen,).....	35 “
55 Section hands,.....	90 cts. per day.
4 Watchmen,.....	90 “ “ “
15 Station agents, (average).....	\$35 53 per mth.

STATE OF VERMONT, }  
 RUTLAND COUNTY, ss. }

I, F. E. Woodbridge, depose and say that the facts set forth and statements made in the foregoing report, which has been signed by me are true and correct according to the best of my knowledge, information and belief.

Signed,

F. E. WOODBRIDGE,

*Managing Trustee.*

Subscribed and sworn to before me this 14th day of October 1861.

H. G. CLARK, *Justice Peace.*

# ANNUAL REPORT

OF THE RUTLAND AND BURLINGTON RAILROAD COMPANY FOR THE  
YEAR ENDING AUG. 31, 1861.

TABLE A.

### STOCK AND DEBTS.

Capital Stock,.....	\$1.242.500	00
Eight per cent. stock,.....	382.700	00
Six    "         "         "         ...	605.200	00
"         "         "         "         pref'd..	2.976	31
	<hr/>	608.176 31
		<hr/> 2.233.376 13
7 per cent. first mortgage bonds.....	1.800.000	00
7 per cent. second mortgage bonds,..	937.500	00
7 per c't. 3d mort. b'nds.	436.500	00
7 per c't. conv'tible notes..	5.498	10
	<hr/>	441.998 10
		<hr/> 3.179.498 10
7 per cent. floating liabilities.....	972.512	15
		<hr/>
		<b>\$6.386.393 56</b>

**TABLE B.**

### COST OF CONSTRUCTION.

**Total cost of construction as per last report.....3.989.708 05**  
**Expended since last report.....Nothing.**

TABLE C.

## EQUIPMENT.

Total cost of equipment as per last report,.....	556.275	58
Expended since last report,.....	Nothing.	
Total cost of road and equipment,.....	4.545.983	61

TABLE D.

## CHARACTERISTICS OF ROAD.

Length of road.....	119 miles, 2846 ft.
“ “ completed,.....	“ “ “
“ “ branches,.....	none.
“ “ side tracks,.....	16 miles.
Weight of rail per yard, ..	60 pounds.

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structure's	No. of Spans.	Length of bridging in feet.
Trestle bridging,.....	4	12	157
Truss bridging, 50 feet span and under, ..	5	5	197
Truss do., from 50 to 100 feet span,.....	11	12	852
Truss do. from 100 to 150 ft span,.....	18	29	3523
Truss do., 150 feet span and over,.....	4	4	677
Stone arch bridges,.....			
Total,.....	42	62	5406

Number of road crossings at grade,.....	85
Number of road crossings above and below grade,.....	16
Number of cross ties per mile,.....	2112
Chairs, number per mile, ..	588
Whole number switches on main track,.....	64

## GRADIENTS AND ALIGNMENT.

The books which would enable us to answer the questions under this head were destroyed by fire.

BUILDINGS AND FIXTURES.

Passenger houses,.....	30
Freight houses,.....	6
Engine houses,.....	5
Repair shops,... ..	3
Water stations, . . . . .	16
Dwellings,.....	4
Wood sheds,.....	16
Turn tables,... ..	4
Other buildings, as follows :	
Rail Repair Shops,.....	2

EQUIPMENT.

Number of locomotives owned by the Company on the 30th day of August, 1861.

	Under 16 tons.	16 to 20	20 to 25	25 to 30	30 tons and over.
In good repair, .....	1	10	9		
Requiring slight repair, . . . . .		2	2		
Requiring heavy repairs,.....		2			
Worn out,....					

Number of cars owned by the company, August 31, 1861.

First class 8 wheel passenger cars in good repair,....	14
First class 8 wheel passenger cars wanting repair,.....	2
Second class 8 wheel passenger cars in good repair,.....	2
Second class 8 wheel passenger cars wanting repair,....	none
Baggage, express and mail cars in good repair,.....	6
Baggage, express and mail cars wanting repair,.....	none
Covered freight and 8 wheel cars, in good repair,.....	430
Covered freight and cattle 8 wheel cars, wanting repair,.....	7
Platform 8 wheel cars, in good repair,.....	101
Other freight cars,.....	none
Gravel cars, . . . . .	none
Average weight of box cars,.....	about 8 tons
Average weight of platform cars,.....	7 tons



## TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	196.612
Miles run by freight trains,... ..	164.698
Miles run by gravel, construction and wood trains,.....	49.508
Number of through passengers carried in cars,.....	41.332
Number of way passengers,.....	78.529
Number of miles traveled by way passengers,... ..	1.819.030
Number of miles traveled by through passengers,.....	2.427.093
Average distance traveled by way passengers,...about	23 miles
Number of tons of through freight,.....	87.014
Number of tons of way freight,.....	14.542
Number of tons of way freight carried 1 mile,.....	525.408
Number of tons of through and way freight moved to and from market,.....	Total carried 101.556
Average rate of speed of ordinary passenger trains, per hour,.....	23 miles
Average rate of speed of express trains,.....	32 miles per hour
Average rate of speed of freight trains,.....	12 miles per hour
Rate of fare charged first class through passengers, per mile, about.....	2 <sup>3</sup> cents
Rate of fare charged first class way passengers, per mile,.	3 cents
Average rate of fare charged sec'd class passengers, per mile,.	none
Rate per ton per mile charged on 1st class through freight,.....	4 5-10 cents
Rate per ton per mile charged on 2d class through freight,.....	3 7-10 cents
Rate per ton per mile charged on 3d class through freight,.....	5 cents
Rate per ton per mile charged on 4th class through freight,.....	2 5-10 cents
Rate per ton per mile charged on 1st and 2d class way freight,.....	5 8-10 cents
Rate per ton per mile charged on 3d class way freight,.	3 cents
Rate per ton per mile charged 4th class way freight,.....	3 5-10 cents

TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE.

Ordinary repairs of road bed and superstructure, and extraordinary repairs of road bed,.....	\$43.922 62
Cost of new rails used in repairs,.....	10.603 03
Number of cross ties used for renewals,.....	4.366 01
Insurance and taxes on real estate,.....	6.457 57
Repairs of bridges,.....	9.222 36
Repairs of stations,.....	8.116 46
Repairs of fences,.....	1.294 36
Repairs of masonry, .....	1.207 79
Total, ... ..	82.190 18

## COST OF REPAIRS OF MACHINERY.

Repairs of engines and tenders,.....	17.331 52
Repairs of passenger and baggage cars,.....	9.237 57
Repairs of freight cars,.....	35.097 55
Total, .. ..	61.666 74

TABLE G.

## COST OF OPERATING THE ROAD.

Wood, including the cost of preparing the same,...	39.276 85
Cost of oil and waste for engines and tenders, } oil	7.864 90
passenger cars, baggage cars and freight cars, } waste	1.492 51
Loss and damage of goods,.....	791 80
Loss and damage of baggage,.....	45 00
Damages for injuries to persons, and to property, including fire, and animals killed on road,.....	367 03
Porters, watchmen and switchmen,.....	3.741 67
For salaries of Trustees, President, Directors, Secre- taries, Treasurer, Superintendent, and for printing, stationery, office expenses, and for law expenses,...	13.992 35
Other expenses in detail as follows :	
Removing Ice and Snow,.....	2.850 15
Mail Service,.....	1.457 83
Land Damages,...	82 00
Total, .. ..	71.962 08

## RECAPITULATION OF EXPENSES.

Maintaining roadway,.....	82.190	18
Repairs of machinery,.....	61.666	74
Operating, .....	71.962	08
Proportion of expenses due to passenger business,....	27.121	64
Proportion of expenses due to freight business,.....	30.051	72
Total,.....	272.992	36

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and receipts.*

From passengers,.....	\$118.011	65
From freight,.....	163.732	97
From other sources, viz :		
Expresses, .....	6.999	96
Mails,...	15.500	00
Rents,.....	4.257	95
Miscellaneous, .....	2.025	30
Interest,.....	655	57

*Payments other than for construction.*

## For transportation expenses, viz :

For passenger business,...	27.121	64
For freight business,.....	30.051	73
For other business, and what, as per preceding page.	215.819	00
For interest on funded debt, . . . . .	62.517	00
For carried to surplus fund,.....	38.191	02

## VALUE OF MATERIALS ON HAND.

Wood, 16,660 cords.....	36.231	32
Shop stock,.....	33,330	00

## DETAILS OF EARNINGS FOR THE YEAR ENDING AUG. 31, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,....	5 896 42	6 653 83	8 080 51	6 879 51	4 905 83	4 588 19
Way passengers,..	4 490 74	4 710 78	7 136 44	5 616 28	4 493 09	4 085 86
Through freight,.....	7 410 14	8 431 28	15 806 17	18 703 49	17 170 67	13 416 50
Way freight,.....	1 325 29	1 356 76	2 127 55	3 273 19	2 712 54	2 367 84
Express,.....	583 33	584 33	583 33	583 33	583 33	583 33
Transport of mails,.....	1 291 67	1 291 67	1 291 66	1 291 67	1 291 67	1 291 66
Use of engines,.....						
Use of cars,.....						
Rent,.....	359 37	349 87	355 70	355 70	355 70	355 70
Miscellaneous,.....	216 00					829 18
Total,.....						

## RUTLAND &amp; BURLINGTON RAILROAD.

## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....	3,567 36	3,487 12	4,001 21	5,909 03	3,639 97	4,725 23
Way passengers,.....	3,033 26	3,424 68	4,551 03	4,969 87	5,073 45	4,192 12
Through freight,....	7,213 18	10,069 57	10,084 10	10,174 11	11,476 32	9,246 89
Way freight,.....	1,607 66	1,578 39	2,107 01	2,354 45	2,411 63	1,808 24
Express,.....	583 33	583 33	583 33	583 83	583 83	583 83
Transport of mails,.....	1,291 67	1,291 67	1,261 66	1,291 67	1,291 67	1,291 66
Use of engines,.....						
Use of cars,.....						
Rent,.....	354 87	371 56	347 87	347 87	346 87	356 87
Miscellaneous,....	24 12			22 00	218 00	716 00
Total,.....						

TABLE I.

## ACCIDENTS.

	EMPLOYEES.		OTHERS.	
	Killed.	Injured.	Killed.	Injured.
Trains thrown from track,.....				
Struck by bridge, while on top of freight car,.....	1		1	
Injured at road crossing,.....		1	1	
Struck by post while leaning from car,.....	1			
Total,.....	2	1	2	

Dec. 6, 1860, Miss Hannah Ordway was killed and Hodgman injured by freight train at road crossing at Proctorsville.

Dec. 10, 1860. James Muloy, brakeman, was struck by bridge while on top of freight car and killed at Pittsford.

May 3, 1861. Ellis Burke, brakeman, was struck and killed by post of cattle guard near Cuttingsville, while leaning from car.

June 6, 1861. George B. Plumb, soldier of 2d Vt. Regiment, was struck by bridge and killed near Middlebury, while improperly on top of the passenger car.

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

4 Conductors of passenger trains,.....	\$208 00	per mth.
3 Conductors of freight trains,.....	.125 00	"
1 Conductor of wood and gravel trains,.....	1 50	per day.
2 Master Mechanics,.....	160 00	per mth.
2 Road Masters,.....	116 67	"
67 men in Repair Shops, average,.....	31 27	"
5 Enginemen of passenger trains, average,.....	60 00	"
7 Enginemen of freight trains, average,.....	51 43	"
1 Enginemen of wood and gravel trains,.....	60 00	"
13 Firemen, each,.....	30 00	"
5 Baggage-men, average,.....	32 20	"
9 Switchmen, average,.....	90	per day.
22 Sectionmen, (foremen,) average,.....	31 82	per mth.
85 Section hands, each,.....	80	per day.
14 Watchmen, average,.....	27 00	per mth.
29 Station agents, average,.....	27 35	"
28 Other laborers, average,.....	82	per day.
2 Clerks connected with passenger business,....	100 00	per mth.
5 Clerks connected with freight business, average	46 66	"
1 Superintendent of bridges and Wood Agent,...	66 67	"

SAMUEL HENSHAW AND THOMAS THACHER,

In acc't with Rutland & Burlington R. R., Aug. 31, 1861.

To net earnings to Aug. 31, 1860, per report, . . . \$421,000 22

To net earnings year ending Aug. 31, 1861, . . . . . 38,191 04

\$459,191 26

By paid for

Coupon No. 6, due Feb. 1, 1854, . . . 63,000 00

Coupon No. 7, due Aug. 1, 1854, . . 61,712 00

Coupon No. 8, due Feb. 1, 1855, . . 61,855 50

Coupon No. 9, due Aug. 1, 1855, . . 60,430 50

16,660 <sup>8</sup>/<sub>128</sub> cords wood on hand, . . . 36,231 34

Shop stock, . . . . . 33,330 06

Real estate, . . . . . 32,192 69

Locomotives, . . . . . 41,153 81

Cars, . . . . . 25,151 24

Tools, . . . . . 2,263 00

417,324 14

Available assets, cash, . . . . . 10,348 97

Due from connecting roads, . . . . . 13,096 71

Due from stations, . . . . . 8,868 04

Due from agents, . . . . . 1,550 87

Due from sundry accounts, . . . . . 8,002 53

41,867 12

\$459,191 26

STATE OF VERMONT, } I, George B. Gibbons, Treasurer  
RUTLAND COUNTY, ss. } of the Trustees 2d Mortgage, Rutland and Burlington Railroad Company, do solemnly swear that the above is a true statement of the condition of the finances of said company, their trustees, or assignees or lessees, on the 31st day of August, 1861.

Signed,

GEO. B. GIBBONS, *Treasurer.*

Sworn before me,

F. E. WOODBRIDGE, *Master in Chancery.*



## OFFICERS OF THE COMPANY.

*Directors.*

THOMAS THACHER, *President.*  
JOHN A. CONANT,  
D. A. SMALLEY,  
HARRISON FAY,  
JAS. H. WILLIAMS,  
GEO. F. EDMUNDS,  
E. A. CHAPIN.

E. A. CHAPIN, *Superintendent.*

GEO. B. GIBBONS, *Treasurer.*

STATE OF VERMONT, } Thomas Thacher and E. A. Cha-  
RUTLAND COUNTY, ss. } pin, October 3, 1861, depose and  
say that the facts set forth, and statements made in the foregoing  
report, which has been signed by us, are true and correct accord-  
ing to the best of our knowledge, information and belief.

Signed,

THOMAS THACHER,  
E. A. CHAPIN.

Subscribed and sworn to before me this 3d day of Oct., 1861.

F. E. WOODBRIDGE, *Master in Chancery.*

## ANNUAL REPORT

OF THE RUTLAND & WHITEHALL RAILROAD COMPANY, FOR THE  
YEAR ENDING JUNE 30, 1861.

---

Original cost of the road including land, road bed, iron, ties, depot, and other buildings, .....	\$176,000 00
Cost of branch road at Hydeville, .....	29,700 00
Cost of rolling stock, .....	50,000 00
Total, .....	<u>\$255,000 00</u>

The road, including the branch road and rolling stock, was leased to the Saratoga & Whitehall Railroad Company, by a perpetual lease, bearing date August 6th, A. D., 1857, at a rent equal to 6 per cent. per annum upon the capital stock, payable in equal quarterly instalments, and this rent has been promptly paid by the lessees up to the 10th day of May, A. D., 1861. The contingent expenses have been paid out of this rent, and the balance of the rent regularly paid to stockholders. The stock is divided into shares of \$100 each, and consists of 2,557 shares, of which 329 shares are owned by citizens of this State, and the balance by citizens of other States. The board of Directors consists of five persons, three of whom, together with the President, Vice President, Clerk and Treasurer, are citizens of this State, and reside upon the line of the road.

The Directors are not aware of any accident having happened to persons upon this road during the past year. The bridge across the outlet of Lake Bombazine in Hydeville, has been destroyed by fire during the year, and a new bridge substituted, safely and substantially built.

The length of the main road is about 7 miles, and the length of the branch road about 8000 feet.

The expenses of running this road are so blended by the lessees with the expenses of operating the road from Saratoga Springs in the State of New York to the west line of the town of Fairhaven, that the Directors are unable to report anything specific under this head. As the lease is perpetual, the lessees treat the whole line of road from Saratoga Springs to Castleton village as but one road in fact, and do not discriminate in making disbursements for repairs, or for operating both roads.

The condition of this road is believed by the Directors to be such as to make it perfectly safe as a thoroughfare for the transportation of passengers and freight, although upon some parts of the road the iron rails are somewhat worn, and will soon need to be repaired or replaced with new rails. The lessees have put down about 4000 new ties upon the road during the year.

There are three depot buildings upon the line of the road, and other sufficient buildings for securing freight, wood and engines.

This corporation owes no debts of any description.

The number of bridges upon this road is four, including the bridge at the State line, and they are all of a single span, and substantially built.

This Company own two locomotives, three first class passenger cars, two second class do., seventeen platform freight cars, and fifteen covered freight cars, all of which equipment is leased with the road.

The officers of the company for the current year are as follows :

DIRECTORS.

A. W. HYDE, *Castleton.*

B. F. LANGDON, *Castleton.*

WM. C. KITTREDGE, *Fairhaven.*

W. W. COOK, *Whitehall.*

G. R. I. BOWDOIN, *New York City.*

A. W. HYDE, *President.*

B. F. LANGDON, *Vice Pres. and Trans. Agt.*

WM. C. KITTREDGE, *Clerk and Treas.*

Signed,

WM. C. KITTREDGE,

*One, and in behalf of the Directors.*

STATE OF VERMONT, }  
 RUTLAND COUNTY, SS. }

I, Wm. C. Kittridge, depose and say that the facts set forth and statements made in the foregoing report, which has been signed by me, are true and correct according to the best of my knowledge, information and belief.

Signed,

WM. C. KITTREDGE.

Subscribed and sworn to before me this 7th day of October, 1861.

J. T. KIDDER, *Justice of the Peace.*

## ANNUAL REPORT

OF THE VERMONT CENTRAL RAILROAD COMPANY FOR THE YEAR  
ENDING JUNE 30, 1861.

---

### TABLE A.

#### STOCK AND DEBTS.

The amount of Capital Stock is unlimited by the charter.

One hundred thousand shares of stock have been issued at rates averaging \$50 per share.

\$2,000,000 of first mortgage bonds have been issued and \$1,500,000 of second mortgage bonds, all at 7 per cent. interest.

### TABLE B.

#### COST OF CONSTRUCTION.

Total cost of construction as per last report, Vermont Central Railroad,..... .\$8,402,054 92

### TABLE C.

#### EQUIPMENT.

The details were not kept so as to give answers to the questions under this head.

TABLE D.

## CHARACTERISTICS OF ROAD.

Length of road, Vermont Central,.....	117 miles.
Length of road, Vermont & Canada,.....	55½ miles.
Length of road completed,.....	172½ miles.
Length of branches,.....	2 miles.
Length of side tracks,.....	23¼ miles.
Weight of rail per yard,.....	54 to 62 lbs.

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structures	No. of Spans.	Length of bridging, in feet.
Trestle bridging,.....	3		7890
Truss bridging, 50 feet span and under, ..	45	55	1595
Truss do., from 50 to 100 feet span,.....	6	6	357
Truss do. from 100 to 150 ft span,.....	19	30	3681
Truss do., 150 feet span and over,.....	13	27	4240
Draw bridges,.....	2		329
Total,.....	88	118	17,602

Number of road crossings at grade,....	87
Number of road crossings above and below grade,.....	32
Number of cross ties per mile,.....	2059
Chairs, number per mile,.....	440 to 700
Whole number of switches on main track,.....	94

## GRADIENTS AND ALIGNMENT.

Maximum grade,.....	45 feet to a mile.
Amount of straight line, miles, Vermont Central,.....	85
Amount of curved line, miles, " " .....	34
Maximum radius, feet,.....	11,460
Minimum radius, " .....	1,146

## BUILDINGS AND FIXTURES.

Passenger houses,.....	31
Freight houses,.....	20
Engine houses,....	6
Repair shops,.....	2
Water stations,.....	30
Dwellings,.....	12
Wood sheds,.....	51
Turn tables,.....	4
Other buildings, as follows :	
Car houses,.....	2
Ice houses,....	4

## EQUIPMENT.

Number of locomotives owned by the Company on the 30th day of June, 1861.

	Under 16 tons.	16 to 20	20 to 25	25 to 30	30 tons and over.
In good repair, .....		6	25		
Requiring slight repair, .....		2	3		
Requiring heavy repairs,.....		1	2		
Worn out,.....	1		2		

Number of cars owned by the company, June 30, 1861.

First class 8 wheel passenger cars in good repair,.....	23
First class 8 wheel passenger cars wanting repair,.....	4
Baggage, express and mail cars in good repair,.....	5
Baggage, express and mail cars wanting repair,.....	2
Covered freight and cattle 8 wheel cars, in good repair, ....	555
Covered freight and cattle 8 wheel cars, wanting repair, ...	100
Platform 8 wheel cars, in good repair,.....	114
Other freight cars, .....	26
Gravel cars,.....	32
Average weight of passenger cars,.....	24,000 lbs.
“ “ baggage “ .....	22,000 “
“ “ box “ .....	15,000 “
“ “ platform “ .....	13,000 “

TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	264,146
Miles run by freight trains,.....	485,780
Miles run by gravel and construction trains,.....	20,771
Miles run by wood trains,.....	4,934
Number of through passengers carried in cars,.....	67,883
Number of way passengers,.....	110,791
Number of miles traveled by way passengers,.....	2,470,694
Average distance traveled by way passengers, miles,.....	22 $\frac{3}{4}$
Number of tons of through freight,.....	134,926
Number of tons of way freight,....	108,378
Number of tons of way freight carried 1 mile,.....	11,613,796
Number of tons of thro' freight moved towards market,..	112,160
"    "    "    "    "    from    "	22,766
"    "    way    "    "    towards    "	85,496
"    "    "    "    "    from    "	22,882
Average rate of speed of ordinary pas'ger trains, 23 miles per hour	
Average rate of speed of express trains,.....	25 " "
Average rate of speed of freight trains,.....	12 " "
Rate of fare charged first class thro' passengers, per mile,	2 $\frac{1}{2}$ cts.
Rate of fare charged first class way passengers, per mile,	3 $\frac{1}{4}$ cts.
Rates of freight vary from 1 $\frac{1}{4}$ to 5 cents per ton per mile, according to the season.	
Total number of passengers carried one mile,.....	7,046,535
Total number of tons of freight carried one mile,....	25,669,913



## TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE,

For the year ending June 30, 1861.

Repairs of road bed and superstructure, .....	\$67,913 11
Cost of new rails used in repairs, .....	37,231 49
Cost of repairs of rails, .....	11,510 86
Cost of cross-ties used for renewals, .....	8,306 79
Cost of relaying rails and ties, .....	18,496 29
Insurance and taxes on real estate, .....	3,327 38
Repairs of bridges, .....	30,042 82
Repairs of stations, .....	16,671 15
Repairs of fences, .....	3,436 03
Repairs of gravel, section and hand cars, road tools, and snow plows, .....	3,488 49
Total, .....	\$200,424 41

## COST OF REPAIRS OF MACHINERY.

Repairs of engines and tenders, .....	\$52,390 55
Repairs of passenger and baggage cars, .....	16,469 09
Repairs of freight cars, .....	64,918 56
Repairs of tools and machinery in shops, .....	2,746 63
Oil used about workshops, .....	1,724 14
Fuel, .....	7,905 70
Waste, .....	456 53
Total, ...	\$146,611 20

TABLE G.

## COST OF OPERATING THE ROAD.

Wood, including cost of preparing the same,.....	\$66,865	90
Number of cords wood used by locomotives, ..25,709		
Number of cords wood used at stations,.....1,804		
Number of cords lost by fire,.....79		
Number of gallons oil,.....15,840		
Number of pounds waste,.....32,271		
Cost of oil and waste for engines and tenders,.....	7,591	60
Cost of oil and waste for passenger and baggage cars	890	74
Cost of oil and waste for freight cars,... ..	5,138	29
Loss and damage of goods,.....	2,440	17
Loss and damage of baggage,.....	93	37
Damages for injuries to persons,... ..	848	26
Damages to property, including fire and animals killed on road,.....	188	25
Office expenses and stationery,... ..	2,092	80
Agents, stations, &c,.....	21,225	67
Clerks, ticket master, and master transportation,...	4,304	91
Labor loading and unloading freight, .....	15,499	64
Porters and watchmen,.....	3,722	43
Switchmen,.....	2,031	98
Conductors, baggagemen, and brakemen,.....	22,526	72
Enginemen and firemen,... ..	29,001	50
For salaries of trustees, president, directors, secretaries, treasurer, and superintendent,.....	17,056	55
For law expenses,.....	5,662	81
Balance paid former trustees in settlement,.....	7,713	08
Express, telegraphing, advertising, mail expense, tenements, &c.,.....	14,850	19
Total,.....	\$229,744	36

## VERMONT CENTRAL RAILROAD.

## RECAPITULATION OF EXPENSES.

Maintaining roadway, .....	200,424	41
Repairs of machinery, .....	146,611	20
Operating, .....	229,744	36
	<hr/>	
Total, .....	\$576,779	97
Proportion of expenses due to passenger business, ..	125,000	00
Proportion of expenses due to freight business, ....	451,779	97

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers, .....	209,081	75
From freight, .....	565,076	60
Expresses, .....	4,300	00
Mails, .....	21,531	24
Rents, .....	291	08
Miscellaneous, .....	541	44
	<hr/>	
	\$800,830	11

*Payments other than for Construction.*

For transportation expenses, viz :		
For passenger business, .....	38,921	60
For freight business, .....	122,332	07
For locomotive department, maintenance of way, and general expenses and renewals, .....	415,526	30
	<hr/>	
	\$576,779	97

## VALUE OF MATERIALS ON HAND.

Wood, cords, .....	48,152
Oil, gallons, .....	558

## DETAILS OF EARNINGS FOR THE YEAR ENDING AUG. 31, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.....	11.635 39	16.583 77	14.383 39	14.629 25	9.998 98	8.297 67
Way passengers,.. ..	9.735 93	10.368 96	9.223 99	7.730 44	8.415 33	4.925 24
Through freight,.....	42.488 85	46.048 87	57.438 98	64.906 73	54.816 91	43.240 33
Way freight,.....	5.073 02	4.740 01	4.182 63	5.884 42	4.951 85	3.816 45
Express,.....	358 34	348 33	358 33	358 33	358 34	358 33
Transport of mails,.....	1.794 27	1.794 27	1.794 27	1.794 27	1.794 27	1.794 27
Use of engines,.....						
Use of cars,.....		24 00	3 50		50 00	
Rent,.....						
Interest,.....						549 44
<b>Total,.....</b>	<b>71.085 80</b>	<b>80.918 21</b>	<b>87.385 09</b>	<b>95.303 44</b>	<b>80.385 68</b>	<b>62.981 73</b>

## VERMONT CENTRAL RAILROAD.

## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....	5,989 79	5,696 62	7,461 18	11,784 90	10,671 16	8,738 62
Way passengers,.....	4,177 75	4,032 28	5,561 60	7,247 71	5,114 17	6,677 63
Through freight,...	21,696 47	23,642 87	33,141 06	33,451 91	47,762 86	45,314 03
Way freight,.....	2,820 52	2,259 21	3,871 09	3,855 00	4,638 43	4,034 10
Express,.....	358 34	358 34	358 33	358 33	358 34	358 32
Transport of mails,.....	1,794 27	1,794 27	1,794 27	1,794 27	1,794 27	1,794 27
Use of engines,.....						
Use of cars,.....	74 00					139 58
Rent,.....						
Miscellaneous,.....						
Total,.....	36,911 14	37,783 59	52,187 53	70,239 23	70,339 23	67,066 55

TABLE I.

## ACCIDENTS.

	EMPLOYEES.		OTHERS.	
	Killed.	Injured.	Killed.	Injured.
Trains thrown from track,.....		1		3
Struck by bridge, while on top of freight car,.....				
Injured at road crossing,.....				
Run over while walking on track,	1			1
Total,.....	1	1		4

Aug. 9, 1860. A child at play on the track near Waterbury was run over, and its leg taken off.

Feb. 14, 1861. A passenger car was thrown from the track near Middlesex by a broken rail, and one employee and three passengers injured.

Feb. 25, 1861. Patrick Hassett, a track hand, was run over at Montpelier while at work on the track and killed.

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

6 Conductors of passenger trains,.....	\$3,995	83
20 Conductors of freight trains,.....	8,046	62
2 Conductors of wood and gravel trains,...	868	49
1 Master mechanic,..	2,000	00
2 Road masters,..	1,600	00
150 men in repair shops,.....	57,094	19
10 Engine men of passenger trains,.....	5,929	52
20 Engine men of freight trains,.....	11,679	88
2 Engine men of wood and gravel trains,...	724	90
30 Firemen, .....	9,667	15
6 Baggage men,.....	1,946	65
7 Switch men, .....	2,031	98
37 Section men, (foremen,).....	14,257	30
200 Section hands,.....	53,848	69
14 Watchmen,.....	3,722	43
34 Station agents,..	11,712	10
280 Other laborers,.....	81,808	22
3 Clerks, connected with passenger business,.....	1,500	00
4 Clerks, connected with freight business,.....	2,905	04
Superintendent of bridges salary,.....	1,000	00
Wood agent, salary,.....	1,000	00

OFFICERS OF THE COMPANY.

*Directors Vt. Central Railroad Company.*

GEO. M. DEXTER,  
C. O. WHITMORE,  
JOSEPH CLARK,  
L. UNDERWOOD,  
J. GREGORY SMITH,  
JOHN WHEELER,  
L. BRAINERD, JR.

*Trustees First Mortgage Bonds Vt. Central Railroad.*

L. BRAINERD,  
JOSEPH CLARK,  
J. GREGORY SMITH.

G. MERRILL, *Superintendent for Trustees.*

*Vermont Central Railroad.*

GEO. M. DEXTER, *President.*  
W. C. SMITH, *Treasurer.*  
E. W. PECK, *Secretary.*

STATE OF VERMONT, } St. ALBANS, Aug. 26, 1861.  
FRANKLIN COUNTY, SS. } We, Lawrence Brainerd, Joseph  
Clark and J. Gregory Smith, Trustees, and G. Merrill, Superin-  
tendent, depose and say that the facts set forth, and statements  
made in the foregoing report, which has been signed by us are  
true and correct according to the best of our knowledge, inform-  
ation and belief.

Signed,

L. BRAINERD,  
JOSEPH CLARK,  
J. GREGORY SMITH.

Subscribed and sworn to before me this 26th day of August,  
1861.

JEPHTHA BRADLEY, *Justice Peace.*



## ANNUAL REPORT

OF THE VERMONT AND CANADA RAILROAD COMPANY FOR THE  
YEAR ENDING JUNE 30, 1861.

---

### TABLE A.

#### STOCK AND DEBTS.

The stock of this Company has been fixed by a decision of the Supreme Court of this State made this summer, to have been when the suit was commenced in 1855, \$1,348,500. To which should be added the sum of \$32,700, for which stock was issued since the commencement of the suit in which was made the decision above alluded to. This company has no funded debt, and no floating debt of any magnitude. There are some claims made against the company, most of which are contested. There is a large amount due the company for the rent of the road, it having been leased to the Vt. Central Railroad Company in 1849. No payment of rent has been made to the stockholders since June, 1854, except \$56,000 which has been paid the present season.

### TABLE B.

#### COST OF CONSTRUCTION.

The cost of construction is represented by the amount of capital stock. The amount expended in constructing the road into Burlington, as required by the act of 1859, we cannot now well state as the constructing agents have not as yet made their report to the company. The Treasurer of the company may have it in his power to state the amount. For the amount expended, stock will be issued hereafter. Some payments have been made for land damages and other matters connected with the construction of the road for which stock has not been issued.

## TABLE C.

## EQUIPMENT.

The Company have no equipment, the road having been leased to the Vermont Central Company, has been run by them. Both the Central and Canada road are now operated by receivers appointed by the Court of Chancery.

## TABLE D.

## CHARACTERISTICS OF ROAD.

Reference is made to the report of the trustees and receivers of the Central Railroad, for the desired information called for by this table, and also by all the tables to J., inclusive.

## TABLE J.

The matters pertaining to the earnings and disbursements of the Vermont & Canada Railroad Company, are yet in the hands of the Court, and no statement can be made.

STATE OF VERMONT, }  
WASHINGTON COUNTY, ss. }

9th day of Sept., 1861.

I, Worthington C. Smith, Treasurer of the Vermont & Canada Railroad Company, do solemnly swear that the above is a true statement of the condition of the finances of the Company, their Trustees, or assignees or lessees, on the 30th day of June, 1861.

WORTHINGTON C. SMITH, *Treasurer.*

Sworn before me,

J. C. CROSBY, *Justice of the Peace.*

## VERMONT &amp; CANADA RAILROAD.

## OFFICERS OF THE COMPANY.

*Directors.*

LUCIUS B. PECK, *President.*  
 JOHN PORTER, *Vice President.*  
 E. MOTT ROBINSON,  
 EDWARD BLAKE,  
 WORTHINGTON C. SMITH,  
 JED P. BLAKE,  
 ARTHUR DEXTER.

WORTHINGTON C. SMITH, *Clerk and Treasurer.*

## SALARIES.

Superintendent,.....	\$2000
Treasurer,.....	600
Transportation agent, .....	600

STATE OF VERMONT }  
 WASHINGTON COUNTY, SS. }

I, Lucius B. Peck, depose and say that the facts set forth, and statements made in the foregoing report, which has been signed by me are true and correct according to the best of my knowledge, information and belief.

Signed,

LUCIUS B. PECK.

Subscribed and sworn to before me this 7th day of September 1861.

STODDARD B. COLBY, *Master in Chancery.*

## ANNUAL REPORT

OF THE VERMONT VALLEY RAILROAD COMPANY FOR THE YEAR  
ENDING JUNE 30, 1861.

## TABLE A.

## STOCK AND DEBTS

1. The amount of capital stock as by charter, (with right to increase) .....\$500,000
  2. The amount of capital stock subscribed, ..... 555,000
  3. The amount of capital stock paid in as by last report,.....\$516,163 82
  - 4 The amount of capital stock now paid in.... .516,163 82
- 5358 shares original stock, par value \$100 per share,  
—cash realized,..... 516,163 82

*Funded Debt.*

Funded debt by last report,.....\$793,200 00  
 Amount of funded debt now,.....793,200 00  
 Total of funded and floating debt,.....793,200 00  
 Average rate of interest on funded debt, \$679,200 00 at 7 per cent; \$114,000 00 at 6 cent,

*Classes of Funded Debt.*

	NO. 1.	NO. 2.
Amount,.....	\$500,000 00	\$293,200 00
Date of issue,.....	April 1, 1860	Oct'r. 1, 1854,
Date of payment, .....	April 1, 1860	Oct'r. 1, 1859,
Annual rate of interest,..	{ 386,000 7 pr. ct. } { 114,000 6 pr. ct. }	7 per cent,
Interest when payable,....	April 1, Oct. 1.	Oct 1, April 1,
Cash realized,.....	\$500,00 00	\$175,920 00

The security is mortgage bonds and both classes are payable in New York and are not convertible.

TABLE B.

## COST OF CONSTRUCTION, ETC.

The road was built by contract in gross, including	
everything, .....	\$800,000 00
Land, land damages, and fences, .....	69,741 89
For engineering, .....	753 39
There has been expended which has passed into construction account, in addition to the original contract: for discount on 293,200 2d class bonds, payment of bonds over and above earnings, graveling the road, etc.,.....	
	320,194 65
Incidental expenses,.....	14,096 76
Interest dividend on stock,.....	7,056 61
New side track at Putney,.....	431 10
Total, .....	<u>\$1,212,274 40</u>

TABLE C.

## EQUIPMENT.

Total cost of equipment as per last report, .....	\$89611 79
Total cost of road and equipment, .....	<u>\$1,301,886 19</u>

TABLE D.

## CHARACTERISTICS OF THE ROAD.

Length of road, (completed,) .....	23 69-100 miles.
Weight of rail per yard, .....	.57 pounds.

## CHARACTER AND LENGTH OF BRIDGING.

	No. of Struc- tures.	Number of Spans.	Length of bridging in feet.
Trestle Bridging, . . . . .	2	10	100
Truss bridging, 50 feet span and under, . .	2	1	54
Truss do., from 50 to 100 feet span, . . .			
Truss do., from 100 to 150 feet span, . . .	1	1	116
Truss do., 150 feet span and over, . . . .	2	6	513
Totals, . . . . .	7	18	783

Number of road crossings at grade, . . . . .	11
Number of road crossings above and below grade, . . . . .	3
Number of cross ties per mile, . . . . .	2000
Number chairs per mile, . . . . .	586

## GRADIENTS AND ALIGNMENT.

Level number of miles, . . . . .	7 61-100
Maximum grade, . . . . .	32 feet.
Amount of straight line, miles, . . . . .	10 72-100
Amount of curved lines, miles, . . . . .	12 97-100
Maximum radius, . . . . .	872 feet.
Minimum radius, . . . . .	600 feet.

## BUILDINGS AND FIXTURES.

Passenger houses, . . . . .	4
Freight houses, . . . . .	4
Engine houses, . . . . .	1
Repair shops, . . . . .	1
Water stations, . . . . .	2
Wood sheds, . . . . .	3

One building for storing passenger cars, built in 1857, and addition in 1858 and 1859, cost say \$616 25.

## EQUIPMENT.

Number of locomotives owned by the Company on the 30th June, 1861.

	Under 16 tons.	16 to 20.	20 to 25.	25 to 30.	30 tons and over.
In good repair, .....		2	1		
Requiring slight repairs, .....					
Requiring heavy repairs, .....					
Worn out, .....					

Number of cars owned by the company, June 30, 1861,  
 First class 8 wheel passenger cars in good repair . . . . . 4  
 Baggage, express and mail cars, in good repair, . . . . . 2  
 Covered freight and cattle 8 wheel cars, in good repair, . . . . 31  
 Platform 8 wheel cars, in good repair, . . . . . 10

## TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains, . . . . . 26,470  
 Miles run by freight trains, . . . . . 13,460  
 Miles run by gravel, construction and wood trains, . . . . . 870  
 Number of through passengers carried in cars, . . . . . 15,806  
 Number of way passengers, . . . . . 7,629  
 Number of miles traveled by way passengers, . . . . . 108,339  
 Average distance traveled by way passengers, . . . . 14 $\frac{1}{2}$  miles.  
 Number of tons of through freight, . . . . . 18,600  
 Number of tons of way freight, . . . . . 1,657  
 Number of tons of way freight carried 1 mile, . . . . . 28,703  
 Number of tons of through freight carried 1 mile, . . . . 446,400  
 Average rate of speed of ordinary passenger trains, . . 26 miles.  
 Average rate of speed of freight trains, . . . . . 12 miles.  
 Rate of fare charged first class through passengers, per  
 mile, . . . . . 3 2-10 cents.  
 Rate of fare charged first class way passengers per  
 mile, . . . . . 3 6-10 cents.

Average rate of fare charged second class passengers	
per mile,...	2 7-10 cents.
Rate per ton per mile charged on 1st class thro' freight,	.4 cents.
Rate per ton per mile charged on 2d class thro' freight,	.3 cents.
Rate per ton per mile charged on 3d class thro' freight,	2½ cents.
Rate per ton per mile charged on 1st class way freight,	.8 cents.

### TABLE F.

#### EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE.

For the year ending June 30th, 1861.

Ordinary repairs of road bed and superstructure,...	\$6,315 02
3000 lbs. spikes, .....	101 00
1574 rails, .....	1,337 90
5864 cross ties used for renewals,.....	1,437 40
Insurance and taxes on real estate, ....	450 46
Total,...	<u>\$9,641 78</u>

#### COST OF REPAIRS OF MACHINERY.

Repairs of engines and tenders.....	\$2,020 17
Repairs of passenger and baggage cars,.....	576 99
Repair of freight cars, .....	1,882 62
Total,..	<u>\$4,479 78</u>



## TABLE G.

## COST OF OPERATING THE ROAD.

For the year ending June 30th, 1861.

1299 cords wood, and cost of preparing the same,...	\$3,604 56
Number of cords of wood used by locomotives, 1249	
Number of cords of wood used at stations, . . . . .	50
692 gallons of oil, . . . . .	684 00
3,380 pounds of waste, . . . . .	306 54
6 agents . . . . .	1,220 00
2 clerks, . . . . .	1,070 00
Labor, loading and unloading freight, porters, watchmen and switchmen, . . . . .	910 00
Conductors and baggagemen, . . . . .	1,012 50
Brakemen, . . . . .	865 00
Enginemen and firemen, . . . . .	1,640 00
For salaries of trustees, president, directors, secretaries, treasurer and superintendent, . . . . .	2,590 00
For printing, stationery, and office expenses, . . . . .	125 00
For law expenses, . . . . .	43 21
Use of track, &c., at Brattleboro, . . . . .	1,138 90
Use of turn table at Bellows Falls, . . . . .	104 17
Paid Water Company for water, . . . . .	67 50
Total, . . . . .	<u>\$15,381 38</u>

## RECAPITULATION OF EXPENSES.

Maintaining roadway, . . . . .	\$9,641 78
Repairs of machinery, . . . . .	4,479 78
Operating, . . . . .	15,381 38
Total, . . . . .	<u>\$29,502 24</u>

## TABLE H.

## EARNINGS, RECEIPTS, AND PAYMENTS.

*Earnings and Receipts.*

From passengers, .....	15,209 03
From freight,.....	16,653 09
Expresses,.....	705 90
Mails,.....	2,500 00
Use of cars,.....	1,018 18
Miscellaneous,.....	156 00
	<hr/>
	\$36,242 20

## VALUE OF MATERIALS ON HAND.

1264 cords of wood,.....	\$2,860 16
75 gallons of oil,.....	134 00
420 pounds of waste, .....	42 00
116 tons of old iron rails.....	4,000 00
82 pounds of chairs .....	2 05
1650 pounds of spikes, .....	49 50
258 ties,.....	64 40
Iron and other metals unwrought, .....	450 00
Iron and other metals, worked and partly worked....	4,161 94
Lumber,.....	150 00
New wheel press.....	305 00
10 pair new, 6 pair 2d hand, 2 pairs old wheels, .....	1,186 00
	<hr/>
Total, .....	13,495 00

## VERMONT VALLEY RAILROAD.

## DETAILS OF EARNINGS FOR THE YEAR ENDING JUNE 30, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.....	2,049 00	2,453 80	2,047 48	1,695 57	1,105 61	936 85
Way passengers,.....	646 97	653 99	538 46	379 68	431 32	313 95
Through freight,....	1,319 63	1,401 78	1,582 45	2,237 95	1,753 86	1,304 72
Way freight,.....	149 02	208 94	258 96	276 37	242 49	152 75
Express,.....	70 59	70 59	70 59	70 59	70 59	70 59
Transport of mails,.....	250 00	250 00	250 00	250 00	250 00	250 00
Use of engines,.....	10 00		26 00			
Use of cars,.....	121 48	98 54	71 29	167 01	192 29	149 45
Rent,.....						
Miscellaneous,.....						
Total,.....			4,845 23	5,077 17	4,046 16	3,178 31

## DETAILS OF EARNINGS CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....	840 72	785 90	908 09	1,128 74	1,087 51	1,084 62
Way passengers,.....	266 85	242 72	310 69	455 11	299 17	354 99
Through freight,....	851 71	896 08	1,670 93	1,528 21	1,492 53	1,253 62
Way freight,.....	119 02	186 53	226 27	220 67	254 59	143 38
Express,.....	70 59	70 59	70 59	70 59	70 59	70 59
Transport of mails,.....	250 00	250 00	250 00	250 00	250 00	250 00
Use of engines,.....	130 00					
Use of cars,.....	76 69	72 63	52 15	53 76	78 99	103 92
Rent,.....						
Miscellaneous,.....						
Total,.....	2,605 58	2,504 45	3,483 72	3,707 08	3,533 88	3,261 12

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

In connection with Conn. River Railroad, 2 con-		
ductors, each, .....	\$20	27 per month.
1 freight conductor, .....	40	00 per month.
1 master mechanic, .....	67	50 per month.
5 men in repair shops, .....	170	00 per month.
2 enginemen of passenger, freight and gravel		
trains, .....	110	00 per month.
2 firemen, .....	54	00 per month.
In connection with other roads, 2 baggage-		
men, .....	20	71 per month.
2 switchmen, .....	37	00 per month.
4 section men, (foremen) .....	143	00 per month.
21 section hands, .....	426	00 per month.
2 station agents, .....	54	00 per month.
6 station agents, .....	122	00 per month.
3 brakemen and way baggage masters, .....	86	50 per month.
Clerks connected with passenger and freight.	106	67 per month.

Net earnings, August 31, 1860, .. \$8722 81  
 " " June 30, 1861, .. 6,739 96

STATE OF VERMONT, }  
 WINDHAM COUNTY, ss. } August 21, 1861.

I, James H. WILLIAMS, Treasurer of the Vermont Valley Railroad Company, do solemnly swear that the above is a true statement of the condition of the finances of said company, their trustees, or assignees, or lessees, on the 30th day of June, 1861, according to my best knowledge, information and belief.

J. H. WILLIAMS, Treasurer.

Sworn before me,

RUSSELL HYDE, Justice of the Peace.

OFFICERS OF THE COMPANY.

*Directors.*

HUGH H. HENRY, *President.*  
 ALEX HAMILTON, JR.,  
 GOUVERNEUR MORRIS,  
 G. R. J. BOWDOIN,  
 CHARLES CHAPIN,  
 JOEL PAGE,  
 MADISON SLOAT.

JA'S H. WILLIAMS, *Treasurer.*

LARKIN J. MEAD, *Clerk.*

*Trustees.*

H. H. HENRY,  
 A. HAMILTON, Jr.,  
 GOV. MORRIS,

ALEX. HAMILTON, Jr., *General Agent.*

MADISON SLOAT, *Superintendent.*

SALARIES.

Superintendent, ..... .. \$1500 00 per annum.  
 Treasurer, ..... .. 400 00 per annum.

Signed, HENRY F. GREEN.

STATE OF VERMONT, } I, HENRY F. GREEN, accountant of  
 WINDHAM COUNTY, ss. } the Vermont Valley Railroad, de-  
 pose and say that the facts set forth, and the statements made  
 in the foregoing report, which has been signed by me are true  
 according to the best of my knowledge, information and belief.

HENRY F. GREEN.

Subscribed and sworn before me this 22d day of August, 1861.

RUSSELL HYDE, Justice of the Peace.

# ANNUAL REPORT

OF THE VERMONT & MASSACHUSETTS RAILROAD COMPANY, FOR  
THE YEAR ENDING JUNE 30, 1881.

## TABLE A.

### STOCK AND DEBTS.

Capital stock, including the Greenfield branch and Vermont junction,.....	\$3,200,000 00
Total amount of capital stock paid in, .....	2,214,225 15
Number of shares of capital stock issued,.....	28,801
There is no debt excepting the funded debt, which amounts to,.....	998,925 00

The amount paid for interest each year is six per centum on the above funded debt.

## TABLE B.

### COST OF CONSTRUCTION.

Total cost of construction as per last report,...	\$3,291,215 41
---	----------------

## TABLE C.

### EQUIPMENT.

Total cost of equipment as per last report,.....	\$225,650 20
Total cost of road and equipment, .....	\$3,516,865 61

TABLE D.

## CHARACTERISTICS OF ROAD.

Length of road,.....	69 miles
“ “ completed,.....	all completed
“ “ branches, ...	8 miles
“ “ side tracks,.....	5½ “
Weight of rail per yard,.....	56 lbs.
Length of road in Vermont.....	10 miles
“ “ side tracks, “	1 “

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structures	No. of Spans.	Length of bridging, in feet.
Trestle bridging,.....			
Truss bridging, 50 feet span and under, .	11	15	
Truss do., from 50 to 100 feet span,.....	2	2	
Truss do. from 100 to 150 ft span,.... }	7	44	
Truss do., 150 feet span and over,.... }			
Draw bridges,.....			
Total,.....	20	61	

Number of crossings at grade, . . . . .	63
Number of crossings above and below grade, . . . . .	21
Number of cross-ties per mile, . . . . .	2052
Chairs, number, per mile, . . . . .	556
Whole number of switches on main track, . . . . .	67

## GRADIENTS AND ALIGNMENT.

Maximum grade,.....	58 feet
Amount of straight line, miles,.....	31 <sup>13</sup> / <sub>20</sub>
Amount of curved lines, miles,.....	45 <sup>7</sup> / <sub>20</sub>



## BUILDINGS AND FIXTURES.

Passenger houses,.....	19
Freight houses,.....	19
Engine houses,.....	5
Repair shops,.....	4
Water stations,.....	9
Dwellings,.....	11
Wood sheds,.....	22
Turn tables,...	5
Other buildings, as follows:	
General Office,.....	1
Store building,.....	1
Car house,.....	1
Lumber house,...	1

## EQUIPMENT.

Number of locomotives owned by the company, June 30, 1861.

	Under 16 tons.	16 to 20	20 to 25	25 to 30	30 tons and over.
In good repair, .....			9		
Requiring slight repair, ....			1		
Requiring heavy repairs,.....			1		
Worn out,.....					

First class 8 wheel passenger cars in good repair,...	8
Baggage, express and mail cars in good repair,.....	5
Covered freight and 8 wheel cars, in good repair,.....	80
Covered freight and cattle 8 wheel cars, wanting repair,.....	6
Platform 8 wheel cars, in good repair,.....	71
Other freight cars,.....	21
Gravel cars, .....	16
Average weight of box cars,.....	16,000 lbs.
“ “ platform cars, ....	15,000 “

## TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	52,566
Miles run by freight trains,.....	46,822
Miles run by gravel, construction and wood trains,.....	1,938
Number of through passengers carried in cars,.....	53,991
Number of through passengers carried in cars 1 mile,...	37,836
Number of way passengers, having passes, including charity passes,.....	790
Number of miles traveled by way passengers,.....	687,777
Average distance traveled by way passengers, miles,...	18 nearly.
Number of tons of through freight,.....	55,354 <sup>647</sup> / <sub>1000</sub>
“ “ “ “ carried one mile, 1,595,452 <sup>975</sup> / <sub>1000</sub>	
Number of tons of way freight,.....	22,799 <sup>650</sup> / <sub>1000</sub>
Number of tons of way freight carried 1 mile,.....	189,636 <sup>616</sup> / <sub>1000</sub>
Number of tons of thro' freight moved towards market, or F. R. R.,.....	14,203 <sup>39</sup> / <sub>1000</sub>
Number of tons of through freight moved from market, or F. R. R.,.....	12,375 <sup>787</sup> / <sub>1000</sub>
Average rate of speed of ordinary pas'ger trains, 22 miles per hour	
Average rate of speed of freight trains,.....	10 “ “
Rate of fare charged first class through passengers, per mile,....	3 cents nearly.
Rate of fare charged first class way passengers, per mile,.....	3 cents nearly.
Rate per ton per mile charged on 1st class thro, freight, 7 cts. nea'ly	
“ “ “ “ 2d “ “ “ 6 “ “	
“ “ “ “ 3d “ “ “ 5 “ “	
“ “ “ “ 1st “ way “ 10 “ “	
“ “ “ “ 2d “ “ “ 8 “ “	
“ “ “ “ 3d “ “ “ 6 “ “	

## TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE,

For the year ending June 30, 1861.

Ordinary repairs of road bed and superstructure,...	\$19,202 95
Cost of rails used in repairs,.....	8,537 11
Insurance and taxes on real estate.....	2,624 72
Repairs of bridges,.....	2,943 82
Repairs of stations,.....	3,553 20
Repairs of fences,.....	840 42
Total.....	<u>\$37,702 22</u>

## COST OF REPAIRS OF MACHINERY.

Repairs of engines and tenders, .....	\$15,888 86
Repairs of passenger and baggage cars,.....	4,669 62
Repairs of freight cars, .....	9,912 23
Repairs of tools and machinery in shops,.....	863 66
Road furniture,.....	300 56
Repairs of gravel cars,.....	279 11
Total,...	<u>\$31,914 04</u>

## TABLE G.

## COST OF OPERATING THE ROAD.

Fuel, including cost of preparing the same,.....	\$11,018 26
Cost of oil and waste for engines, tenders, passenger and freight cars,.....	2,129 37
Loss and damage of goods, baggage and property, including fire and animals killed on the road,..	832 42
Incidental expenses,.....	1,666 88
Number of agents .....	20
Number of clerks,.....	3
Clearing snow, .....	1,567 54
Porters, watchmen and switchmen,.....	2,434 48
Water station expense,.....	239 52
Conductors, baggagemen, brakemen, enginemen and firemen, included in freight and passenger depart- ment expenses.	
For salaries of trustees, president, directors, secreta- ries, treasurer, and superintendent,.....	4,900 00
For printing, stationery, and advertising,.....	298 66
For law expenses, .....	363 35
Other expenses in detail as follows :	
Expenses of passenger department,.....	10,552 20
Expenses of freight department,.....	13,005 22
Rent to Connecticut River R. R. Co.,.....	1,500 00
Total,.....	\$50,507 90

## RECAPITULATION OF EXPENSES.

Maintaining roadway, .....	37,702 22
Repairs of machinery,.....	31,914 04
Operating,.....	26,950 48
Total,.....	\$120,124 16
Proportion of expenses due to passenger business,...	10,552 20
Proportion of expenses due to freight business,.....	13,005 22

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers,.....	64,695 70
From freight,. ....	112,216 75
Expresses,.....	3,952 92
Mails,.....	6,000 00
Rents,.....	42,129 06
Miscellaneous,.....	728 19
Tolls,.....	799 00
	<hr/>
	\$230,521 62

## VALUE OF MATERIALS ON HAND.

3000 cords of wood,.....	\$8,000 00
70 tons of coal,.....	490 00
400 gallons of oil,.....	340 00
2200 pounds of waste, .....	176 00
100 tons of old iron rails.....	2,240 00
6300 pounds of chairs .....	157 50
4500 pounds of spikes, .....	135 00
Ties, iron and other metals unwrought, worked and partly worked, and lumber,.....	7000 00

## DETAILS OF EARNINGS FOR THE YEAR ENDING JUNE 30, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.....	7.222 54	9.312 41	8.285 76	6 288 94	5.383 28	4.084 55
Way passengers,.. ..						
Through freight,.....	9.649 03	10.375 03	12.054 21	13.415 24	10.651 30	8.672 77
Express,.....	329 41	329 41	329 41	329 41	329 41	329 41
Transport of mails,.....	500 00	500 00	500 00	500 00	500 00	500 00
Use of cars,.....						
Rent,.....	3.547 92	3.263 42	3.680 09	3.534 50	3.260 42	3.689 00
Tolls,.....	58 00	66 00	70 00	88 00	143 00	60 00
Miscellaneous,.....	66 68	30 01	88 27	37 30	199 53	2 30
<b>Total,.....</b>	<b>21.373 58</b>	<b>23.876 28</b>	<b>25.007 74</b>	<b>24.193 89</b>	<b>20.466 94</b>	<b>17.338 03</b>

## DETAILS OF EARNINGS CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,.....	3,119 22	3,349 48	4,279 12	4,758 44	4,395 42	4,216 54
Way passengers,.. ..						
Through freight,.....	6,639 62	7,302 50	9,039 50	10,472 42	7,459 80	5,485 33
Way freight,.....	329 41	329 41	329 41	329 41	329 41	329 41
Express,.....	500 00	500 00	500 00	500 00	500 00	500 00
Transport of mails,.....						
Use of engines,.....						
Use of cars,.....	3,655 19	3,320 00	3,688 51	3,562 92	3,260 42	3,666 67
Rent,.....	49 00	41 00	59 00	60 00	56 00	49 00
Tolls,.....	36 72	24 88	58 29	120 79	18 79	44 63
Miscellaneous,.....						
Total,.....	14,329 16	14,867 27	17,953 83	19,803 98	16,019 94	15,291 59

TABLE I.

## ACCIDENTS.

Total number of persons killed,..... 1

February 20th, 1861. Between Gardner and Ashburnham, on freight train, Dwight J. Weaver, brakeman, came in collision with a bridge of public way, and was instantly killed.

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

3 Conductors of passenger trains,.....	\$1680 00
1 Conductor of freight trains,.....	540 00
1 Master Mechanic,.....	840 00
1 Road Master, and Bridge and wood agent,.....	1200 00
39 men in repair shops, and extra repair shop men &c.,	18839 48
3 Enginemen of passenger trains,.....	1944 00
1 Enginemen of freight trains,.....	648 00
6 Firemen,.....	2124 00
3 Baggage men,.....	1284 00
2 Switchmen,.....	594 00
5 Sectionmen, (foremen,).....	2400 00
85 Section hands, and extra section hands,.....	11491 33
3 Watchmen,.....	1152 00
18 Station agents,.....	8180 76
1 Other laborer,.....	378 00
1 Flagman,.....	324 00
1 Tollman,.....	180 00
1 Porter,.....	240 06
2 Freight Brakemen,.....	840 00
2 " Agents,.....	480 00
3 Bridge Carpenters employed during the summer mths,	652 91
1 Clerk connected with passenger business,.....	420 00
1 Clerks connected with freight business,.....	840 00
	<hr/>
	\$57,272 48



TABLE J. (CONTINUED.)

Amount net earnings August 31, 1860,.....	\$116580 69
“ “ “ June 30, 1861,.....	110397 46
Total amount payments to Sinking Fund,.....	50000 00
Interest on Funded Debt,.....	59280 00
The company owe in bonds, old,...	9200 00
“ “ “ new,.....	988000 00
Bond certificates,.....	1725 00
There is no Floating Debt.	
Cash on hand and loaned on call June 30, 1861,....	67391 79

COMMONWEALTH OF MASSACHUSETTS, } I, John Rogers, Treas-  
 SUFFOLK COUNTY, ss. } surer of the Vermont  
 & Massachusetts Railroad Company, do solemnly swear that  
 the above is a true statement of the condition of the finances of  
 said company, their trustees, or assignees or lessees, on the 30th  
 day of June, 1861.

Signed,

JOHN ROGERS, *Treasurer.*

Sworn before me,

HENRY C. HUTCHINS, *Justice of the Peace.*

## OFFICERS OF THE COMPANY.

*Directors.*

JAMES CHEEVER,  
JOSEPH GOODHUE,  
D. N. CARPENTER,  
JOHN J. SWIFT,

JAMES CHEEVER, *President.*  
JOHN ROGERS, *Treasurer.*  
O. T. RUGGLES, *Superintendent.*  
B. D. LOCKE, *Clerk.*

## SALARIES

3 Trustees, each,.....	\$100 00
President,...	1500 00
Superintendent,.....	1500 00
Treasurer and Clerk,.....	1500 00

Respectfully submitted by

JAMES CHEEVER,  
JOSEPH GOODHUE,  
D. N. CARPENTER,  
JOHN J. SWIFT, } *Directors.*

STATE OF MASSACHUSETTS, }  
MIDDLESEX COUNTY, ss.

We depose and say that the facts set forth and statements made in the foregoing report, which has been signed by us, are true and correct according to the best of our knowledge, information and belief.

Signed,

JOSEPH GOODHUE,  
JAMES CHEEVER,  
JOHN J. SWIFT.

Subscribed and sworn to before me this 13th day of August, 1861.

EDWARD G. LUCAS, *Justice of the Peace.*

## ANNUAL REPORT

OF THE WESTERN VERMONT RAILROAD COMPANY, FOR THE YEAR  
ENDING JUNE 30, 1881.

---

### TABLE A.

#### STOCK AND DEBTS.

The Western Vermont Railroad is leased and run by the Troy & Boston Railroad, with its own rolling stock. It is out of the power of the Lessee to fill the blanks in tables "A" to "D," inclusive.

### TABLE D.

#### CHARACTERISTICS OF ROAD.

Length of road,.....	59 miles.
Length of road completed,.....	59 miles.
Length of branches,.....	5½ miles.
Length of side tracks,.....	15,937 feet.
Weight of rail per yard,.....	56 to 60 lbs.

CHARACTER AND LENGTH OF BRIDGING.

	No. of Struc- tures.	Number of Spans.	Length of bridging in feet.
Trestle Bridging, . . . . .			430
Truss bridging, 50 feet span and under, . .	16	1	688
Truss do., from 50 to 100 feet span, . . .	3	1	180
Truss do., from 100 to 150 feet span, . . .	7	1	738
Truss do., 150 feet span and over, . . . .	2	1	320
Totals, . . . . .	28	4	2356

Number of road crossings at grade, . . . . .	60
Number of road crossings above and below grade, . . . . .	60
Number of cross ties per mile, . . . . .	2,344
Chairs, number per mile, . . . . .	586
Whole number of switches on main track, . . . . .	26

BUILDINGS AND FIXTURES.

Passenger houses, . . . . .	9
Freight houses, . . . . .	9
Engine houses, . . . . .	3
Repair shops, . . . . .	1
Water stations, . . . . .	6
Dwellings, . . . . .	1
Wood sheds, . . . . .	5
Turn tables, . . . . .	2

TABLE E.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	84,168
Miles run by freight trains,... ..	52,416
Miles run by gravel, construction and wood trains,....	5,360
Number of through passengers carried in cars,.....	14,272
Number of way passengers,.....	47,379 $\frac{1}{2}$
Number of passengers having passes,.....	936
Number of miles traveled by way passengers,... ..	599,181
Average distance traveled by way passengers,.....	12 $\frac{3}{4}$
Number of miles traveled by passengers having passes	46,800
Number of tons of through freight,.....	13,965
Number of tons of way freight,.....	28,905
Number of tons of way freight carried 1 mile,.....	1,463,743
Number of tons of through freight moved towards market, moving north and east,.....	12,413
Number of tons of through freight moved from mar- ket, moving south and west,....	1,552
Number of tons of way freight moved towards mar- ket, moving north and east,.....	15,775
Number of tons of way freight moved from market, moving south and west, .....	13,130
Average rate of speed of ordinary passenger trains, per hour, ... ..	22 $\frac{39}{100}$ miles.
Average rate of speed of express trains, per hour,....	26 $\frac{10}{100}$ miles.
Average rate of speed of freight trains, per hour,.....	13 miles.
Rate of fare charged first class through passengers, per mile, about.....	2 $\frac{2}{3}$ cents.
Rate of fare charged first class way passengers, per mile,.	.8 cents.
Rate per ton per mile charged on 1st class thro' freight,.	.5 cents.
Rate per ton per mile charged on 2d class thro' freight,	3 $\frac{1}{2}$ cents.
Rate per ton per mile charged on 3d class thro' freight,	2 $\frac{3}{4}$ cents.
Rate per ton per mile charged on 4th class thro' freight,	1 $\frac{67}{100}$ cents.
Rate per ton per mile charged on 1st class way freight,	5 $\frac{8}{100}$ cents.
Rate per ton per mile charged on 2d class way freight,...	.5 cents.
Number of tons of through freight carried 1 mile,....	737,900
Number of through passengers carried 1 mile,.....	674,071

TABLE F.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE.

For the year ending June 30, 1861.

Ordinary repairs of road bed and superstructure, and extraordinary repairs of road bed, relaying ties, fencing and masonry, . . . . .	\$17,952 64
Cost of new rails used in repairs, . . . . .	1,597 26
Number and weight of spikes, pounds, . . . . .	22,565
Weight of spikes, pounds, . . . . .	4,800
Cost of repairs of rails, . . . . .	1,366 82
Number of cross ties used for renewals, . . . . .	18,500
Repairs of bridges, . . . . .	2,244 32
Repairs of stations, . . . . .	65 32

## COST OF REPAIRS OF MACHINERY.

The Western Vermont Railroad Company owns no rolling stock.

TABLE G.

## COST OF OPERATING THE ROAD.

Wood, including the cost of preparing the same, . . . . .	8,700 00
Number of cords of wood used by locomotives, 2,800	
Number of cords of wood used at stations, . . . . .	100
Number of gallons of oil, . . . . .	699
Number of pounds of waste, . . . . .	2,413
Cost of oil and waste for engines and tenders, passen- ger cars, baggage cars and freight cars, . . . . .	1,010 72
Damages for injuries to persons, and to property, including fire, and animals killed on road, . . . . .	355 89
Number of agents and clerks, . . . . .	11
Porters, and watchmen, switchmen and wood and water attendance, . . . . .	908 12
Conductors, baggagemen and brakeman, . . . . .	3,305 73
Enginemen and firemen, . . . . .	2,620 94
Road master and wood agent, . . . . .	500 00
Rents, . . . . .	37,149 00

## WESTERN VERMONT RAILROAD.

## RECAPITULATION OF EXPENSES.

Maintaining Roadway, .....	\$23,226 36
Operating, .....	17,401 40
Proportion of expenses due to passenger business, .	21,939 00
Proportion of expenses due to freight department, ...	18,688 76
<b>Total, .....</b>	<b>\$40,627 76</b>

## TABLE H.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers, .....	39,367 99
From freight, .....	46,114 03
Expresses, .....	1,200 00
Mails, .....	5,450 00
Rents, .....	200 00
	<hr/>
	\$92,332 02

*Payments other than for Construction.*

For transportation expenses, viz :	
For passenger business, .....	21,939 00
For freight business, .....	18,688 76
Rents, .....	37,149 00
	<hr/>
	\$77,776 76

## DETAILS OF EARNINGS FOR THE YEAR ENDING JUNE 30, 1861.

SOURCE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
Through passengers,.....	2.456 25	3.298 42	2.635 20	2.201 74	1.773 71	1.439 90
Way passengers,.....	1.558 56	2.544 57	1.940 18	1.466 92	1.301 20	1.109 34
Through freight,.....	713 86	1.363 54	1.302 72	1.837 60	1.451 51	751 62
Way freight,.....	3.902 73	2.883 89	3.339 81	3.993 64	4.159 67	1.933 82
Express,.....	100 00	100 00	100 00	100 00	100 00	100 00
Transport of mails,.....	454 16	454 16	454 16	454 16	454 16	454 16
Use of engines,.....						
Use of cars,.....	16 66	16 66	16 66	16 66	16 66	16 66
Rent,.....						
Miscellaneous,.....						
<b>Total,.....</b>						



## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
Through passengers,....	1,110 84	1,057 31	1,442 08	1,941 83	1,649 28	1,580 44
Way passengers,.....	818 86	909 48	1,389 88	1,228 40	1,171 76	1,341 84
Through freight,.....	525 04	1,174 47	1,558 16	1,907 50	1,416 21	1,132 98
Way freight,.....	962 96	1,241 55	2,920 62	2,652 45	2,770 45	1,817 23
Express,.....	100 00	100 00	100 00	100 00	100 00	100 28
Transport of mails,.....	454 16	454 16	454 16	454 16	454 16	454 16
Use of cars,.....						
Tolls,.....						
Miscellaneous,.....						
Rent,.....	16 66	16 66	16 66	16 66	16 66	16 66
Total,.....						

TABLE J.

## NUMBER OF EMPLOYEES AND COMPENSATION.

2 Conductors of passenger trains,...	\$50 00	per month.
1 Conductor of freight trains,.....	50 00	per month.
1 Roadmaster,.....	500 00	per year.
2 Men in repair shops,...	1 00 to 1 50	per day.
2 Enginemen of passenger trains,.....	60 00	per month.
1 Enginemen of freight trains, .....	60 00	per month.
3 Firemen, ....	30 00	per month.
2 Baggage-men,.....	30 00	per month.
2 Switchmen, ...	30 00	per month.
10 Section men, (foremen,) ...	1 25	per day.
74 Section hands,.....	84 cts.	per day.
3 Watchmen,.....	1 00	per day.
11 Station Agents, .....	from 10 00 to 35 00	per month.
1 Superintendent of bridges,.....	50 00	per month.
1 Wood agent,...	500 00	per year.

STATE OF NEW YORK, }

RENSSELAER COUNTY, ss. }

DANIEL ROBINSON and ISAAC V. BAKER, depose and say that the facts set forth, and statements made in the foregoing report, which has been signed by us, are true and correct, according to the best of our knowledge, information and belief.

DANIEL ROBINSON,  
ISAAC V. BAKER.

Subscribed and sworn to before me, this 20th day of August,  
1861.

JOHN H. COLBY, Com. of Deeds.

## ANNUAL REPORT

OF THE SOUTHERN VERMONT RAILROAD COMPANY, FOR THE  
YEAR ENDING JUNE 30, 1861.

---

The Southern Vermont Railroad was built by contractors complete, for \$200,000. Leased perpetually to the Troy & Boston Railroad Company for \$12,000 per annum. Is about six miles in length. It has bridges as follows: Two of 140 feet span each; one of 300 feet, three spans; one of 200 feet, two spans.

It is impossible to give a statement of its doings, separate from the annual report to the Legislature of the state of New York.

The fiscal year of the Troy & Boston Railroad ends September 30th. Their books are kept in conformity with the requirements of the Laws of the State of New York. Those of Vermont choosing the 30th June, and containing different tables and data, renders it very inconvenient, and nearly impossible, to fully comply with the demands of the Railroad Commissioner of that state.

## A P P E N D I X .

---

The following matters are introduced here as the more convenient form.

My attention has been directed, at every convenient opportunity, to the examination of different arrangements for protecting the rails from the unequal and excessive wear at the ends or joints. Several methods have been adopted for the purpose with different degrees of success.

Breaking joints, in laying the rails, has been adopted with some success. In this case the iron chair (cast or wrought) is used. The result of this arrangement is a perceptible difference in the less wear of the joint than in the old way. The motion of the car is less wearisome to the passenger, and a very considerable diminution of the noise from the wheels. The engine men, however, complain of the unequal movement given to the engine, and more care is required in keeping up the track.

The wrought iron chair is better than the cast iron chair ; it is more yielding under the blow of the wheel, but principally is better as it more completely secures the rail from motion than the cast-iron.

In my report of last year, mention was made of the Howe chair, then in use principally on the Vermont Central and Vermont and Canada roads. It had then been tested by an experience of more than four years, and the result was very satisfactory. The experience of another year adds to the testimony of its utility.

This chair confines the rail at the joint, keeps it in good adjustment, and preserves the joint from wearing more rapidly than any other portion of the rail. It also secures an easier motion of the cars, and causes far less noise than with the old arrangement with the cast iron chair.

The Superintendent of the Rutland and Washington Railroad has introduced this chair upon his road, and, I doubt not, he will find his advantage in using it.

The same chair is also in use on the Connecticut and Passumpsic Rivers Road, and gives good satisfaction.

The Howe chair being made of wood is subject to decay, and how long it will last in ordinary cases does not yet seem to be settled, not having been long enough in use to test its durability.

The upper part of the chair which is made to fit the side of the rail, is both too narrow and too short, and thus more likely to crack or be split by driving the spikes through it. This would in some measure be remedied by increasing the length of the piece so as to reach beyond another tie on each side of the joint and thus admit of two additional spikes, one in each of these ties. This would give greater strength to resist the lateral pressure upon the joint. If this piece should be bolted to the rail at two points it would improve it still more.

If these chairs were thoroughly painted on all sides, and so long before laying down as to have the paint well hardened, I believe it would insure greater durability.

Another method for securing the joints of the rails, is in use on the Atlantic and St. Lawrence Railroad. A bar of iron fitted to the rail and two feet in length, is placed on each side of the rail and fastened by four bolts reaching through each bar and secured by nuts, and the ends of the rails rest on the tie, and the rails are spiked to the ties in the usual way. Wood was first used instead of the bar on the outside, but this has given place to the bar of iron, which is much preferred.

This arrangement, as well as the Howe chair, preserves the rails from unequal wear at the joints, and is equal in its effect upon the motion and noise of the car. It costs some thirty-five cents more per joint than the Howe chair, but is not subject to like decay.

In this arrangement, when first used, the contraction of the iron by cold was not provided for, and in some cases the bars of iron were consequently broken.

Another method of securing the joints of the rails is adopted on the Rutland and Burlington Railroad, for the first time in this State, but previously in use on some other roads, and quite similar to the last mentioned in arrangement, and also produc-

tive of like results to the rails at the joints and upon the motion of the cars.

In this case a piece of oak some six feet in length, about seven inches wide by about two and a half inches thick, is fitted to the outside of the rail and fastened to it by four bolts secured by nuts, and is also bolted to four ties, the joint being between two ties. No plate or bar is used on the inside of the rail. This method costs about one dollar per joint, about the same as that used on the Atlantic and St. Lawrence Railroad.

Another method similar in principle, but different in form from either of the last two described arrangements, is in use on the Southern Vermont railroad, and is, I am informed, the invention of the contractor who built that road. This plan also is fitted to preserve the joints of the rails from excessive wear, and gives also a like easy motion to the cars, and so far appears to answer equally as well as the other plans.

In this case a casting is used, somewhat in the form of the half of a hollow cylinder, about a half inch thick and seven inches long, fitted to the side of the rail, on the hollow side of this is fitted a wrought iron plate, a half inch thick, the casting extends equally upon each side of the joint and is fastened to each rail by a bow bolt, which passes also through the iron plate and is secured by nuts resting on this plate, the holes through the rails are two and a quarter inches from the ends of the rails, and no plate is used on the inside of the rail. The joint is between the ties, which are laid close to each other. In this plan no allowance was made for the expansion of the rail by the heat of summer, and in consequence a considerable bending of some rails resulted from expansion, (the track having been laid in cold weather.) This was remedied by cutting off a portion of some of the rails. The cost of this arrangement I could not ascertain, and is probably less than either of the others.

This plan does not give the same security to the joint as either of the other three plans.

The New York Central Railroad has used "the compound solid head rail" to some extent, with satisfactory result, as I have been informed; this rail is also in use on some other roads. It makes an easy track for the passenger, and it also saves the *jolt* at the joint. I am not, however, informed sufficiently to speak of the cost or durability of this kind of rail. It doubtless

obviates some of the objections to other forms of "compound rails," but I am not without apprehension that experience, the only sure guide, will develop important objections to this form.

#### SAFETY SWITCHES.

In July, 1860, my attention was called to a switch at Richmond on the Vermont Central Railroad, the invention of Francis A. Joiner, which had been in use some four months. I then saw its operation with a train under good speed, and it worked satisfactorily. The same switch has been in use at the same place up to the present time and in daily use. For the sake of the experiment it has often been left open, but the trains have been invariably carried to the right track, and without the occurrence of the least accident. It has received the unqualified approval of all who have witnessed its operation.

This switch is cheap in its construction and simple in its arrangement, requiring not more repairs than the common switch and is as easily kept free from ice and snow.

Another called the "Wood Switch" has been lately put down on the Rutland and Burlington Railroad at three places. This switch gives entire satisfaction in its operation upon passing trains for the time it has been used, and appears well adapted to afford the security designed.

The objection to its use will be the cost of its construction, probably not less than one hundred dollars, and the labor necessary to keep it cleared of ice and snow.

The following table shows the earnings, expenses and net surplus from 1856 to 1861, of each of the six roads heretofore mentioned,—as obtained from the several reports.

	EARNINGS.	EXPENSES.	NET SURPLUS.
1856			
C. & P. R.,	\$174,308 21	\$98,125 41	\$76,182 80
R. & B.	496,440 01	446,929 11	49,510 90
R. & W.	68,525 42	72,080 22	3,554 80
Vt. Central,	765,935 54	552,339 82	213,595 72
Vt. Valley,	49,186 93	37,586 97	11,599 96
Western Vt.,	125,022 08	104,233 21	20,788 87
1857			
C. & P. R.,	177,588 21	104,187 27	73,400 94
R. & B.,	484,124 94	306,964 18	177,160 76
R. & W.,	168,845 43	157,029 08	11,816 35
Vt. Central,	808,327 87	653,088 95	155,268 92
Vt. Valley,	50,783 27	38,270 67	12,512 60
Western Vt.,	Not reported.	Not reported.	Not reported.
1858			
C. & P. R.,	171,625 62	103,773 13	67,852 49
R. & B.,	332,314 69	290,527 70	41,786 99
R. & W.,	174,423 94	172,863 53	1,565 41
Vt. Central,	705,837 61	578,648 74	127,388 87
Vt. Valley,	43,998 07	33,505 60	10,492 47
Western Vt.,	55,858 82	56,726 25	867 43
1859			
C. & P. R.,	192,122 51	110,121 75	82,000 76
R. & B.,	354,288 01	272,726 99	81,561 02
R. & W.,	172,826 40	135,702 73	37,123 67
Vt. Central,	702,271 58	586,595 64	115,675 94
Vt. Valley,	45,785 62	38,520 03	7,265 59
Western Vt.,	No report.	No report.	No report.
1860			
C. & P. R.,	187,646 53	123,027 13	64,619 40
R. & B.,	334,367 73	278,618 64	55,749 09
R. & W.,	150,917 72	120,429 71	30,488 01
Vt. Central,	775,568 91	647,842 33	127,726 58
Vt. Valley,	45,930 69	37,407 88	8,522 81
Western Vt.,	90,012 87	49,357 14	40,655 73
1861			
C. & P. R.,	183,750 27	91,067 36	92,682 91
R. & B.,	311,182 43	272,992 37	38,191 06
R. & W.,	138,447 58	109,762 05	28,675 53
Vt. Central,	800,830 11	576,779 97	224,050 14
Vt. Valley,	36,242 20	29,502 24	6,739 96
Western Vt.,	99,322 02	40,627 76	51,704 26
Total,	\$9,467,674 84	\$7,307,777 50	\$2,160,808 71



It appears from the reports that the net earnings of the several roads for six years (Western Vermont only four years) and also the amounts paid from the surplus, are as follows :

	NET EARNINGS.	PAYMENTS.
Connecticut & Passumpsic Rivers,	\$456,739 30	\$306,182 80
Rutland and Burlington,	543,959 82	423,826 60
Rutland & Washington,	106,124 17	
Vermont Central,	983,706 17	
Vermont Valley,	57,133 39	15,169 00
Western Vermont,	113,145 86	122,246 50

What has been done with the balance of the net earnings does not appear from the reports, except Rutland & Burlington, and Western Vermont.

It is ascertained from the above table that the average annual expense for six years, per mile of road, is as follows :

C. & P. R.,	\$1,154 48	Ratio of expenses to earnings, 58 per ct.			
R. & B.,	2,501 27	"	"	"	88 "
R. & W.,	2,266 76	"	"	"	88 "
Vt. Central,	3,414 58	"	"	"	78 "
Vt. Valley,	1,554 62	"	"	"	79 "
Western Vt.,	1,063 32	"	"	"	69 "

## ANNUAL REPORT

OF THE WESTERN VERMONT RAILROAD COMPANY FOR THE YEAR  
ENDING AUGUST 31st, 1860.

---

The following report of the Western Vermont for 1860 is inserted here for the convenience of comparison. The report not having been received till after the Commissioner's Report of last year was printed.

### TABLE A.

#### STOCK AND DEBTS.

The Western Vermont Railroad is being run by the Troy & Boston Railroad, under a lease for a term of years. We have no means for obtaining information that will enable us to fill the blanks in Tables A, B, C, D and portions of E and G, and as our fiscal year commences October 1st, we are unable to report only for the eleven succeeding months.

### TABLE E.

#### CHARACTERISTICS OF ROAD.

Length of road,.....	59 miles
“ “ completed, .....	59 miles
Weight of rail per yard,.....	56 to 60 lbs

## CHARACTER AND LENGTH OF BRIDGING.

	No. of structure's	No. of Spans.	Length of bridging, in feet.
Trestle bridging,.....			430
Truss bridging, 50 feet span and under, ..	16	1	680
Truss do., from 50 to 100 feet span,.....	3	1	180
Truss do. from 100 to 150 ft span,.....	7	1	738
Truss do., 150 feet span and over,..... }	2	1	320
Draw bridges,.....			
Total,.....			

Number of crossings at grade, ..... 60  
 Number of crossings above and below grade, ..... 60  
 Number of cross-ties per mile, ..... 2344  
 Average length and size of cross-ties, ..... 7½ feet, 6x8  
 Kind of timber used, ..... chestnut, oak and tamarac.  
 Chairs, number, per mile, ..... 586  
 Wrought or cast iron, .. cast.  
 Average weight of cast iron chairs, ..... 16 lbs.  
 Whole number of switches on main track, ..... 26  
 Kind of switches used, ..... ordinary.

Chestnut timber proves most durable for ties. Spruce timber is used in construction of bridges. But one bridge covered.

## GRADIENTS AND ALIGNMENT.

We have no surveys or profiles of the road.

## BUILDINGS AND FIXTURES.

Passenger houses, ..... 9  
 Freight houses, ..... 9  
 Engine houses, ..... 3  
 Repair shops, ..... 1  
 Water stations, ..... 6  
 Dwellings, ..... 1  
 Wood sheds, ..... 5  
 Turn Tables, ..... 2

## EQUIPMENT.

The road is operated with the equipment of the Troy & Boston Railroad.

TABLE F.

## BUSINESS OF THE YEAR.

Miles run by passenger trains,.....	60,542
Miles run by freight, gravel, construction, wood trains,	36,748
Number of through passengers carried in cars,.....	11,884
Number of way passengers,.....	46,408
Number of miles traveled by way passengers.....	540,020
Number of miles traveled by passengers, (other than employees) having passes,.....	unknown.
Whole number tons of through freight, .....	10,053
Number of tons way freight,....	27,878
Number of tons of freight carried 1 mile,.....	1,299,983
Average rate of speed of ordinary pas'ger trains, 22 miles per hour	
Average rate of speed of express trains.....	32½ " "
Average rate of speed of freight trains,.....	12 " "
Rate of fare charged 1st class through passengers, per mile,...	2 to 3 cts.
Rate of fare charged 1st class way passengers, per mile,	3 cts.
Rate per ton per mile charged on 1st class thro, freight,....	7 <sup>6</sup> / <sub>10</sub> cts.
" " " " 2d " " "	2 <sup>9</sup> / <sub>10</sub> "
" " " " 3d " " "	2 "
" " " " 1st " way "	5 to 8 cts.
" " " " 2d " " "	4 to 6 cts.
" " " " 3d " " "	3 to 4 cts.

TABLE G.

## EXPENSES OF MAINTAINING ROADWAY AND REAL ESTATE,

For the 11 months ending Aug. 31, 1860.

Ordinary and extraordinary repairs of road bed and railway, including widening cuts and embankments, rebuilding and repairing masonry, ballasting, &c...	17,438 83
Cost of repairs of iron rails,.....	1,327 31
Number of cross-ties used for renewals,.....	20,000
Cost of same, average,.....	28 cents.
Insurance and incidental expenses,.....	702 84
Repairs of bridges and building new ones,.....	5,011 46
Repairs of stations, .....	85 57

We have rebuilt, to supply decayed ones, 6 high truss bridges 560 feet, and 9 low truss bridges 290 feet.

TABLE H.

## COST OF OPERATING THE ROAD.

Fuel, including cost of preparing the same,.....	\$8,775 02
Number of cords of wood used by locomotives, 2,700	
Number of cords of wood used at stations . . . . .	100
Oil and waste, used in common with Troy & Boston, and no separate account kept.	
Loss and damage of baggage,.....	22 26
Damage to property including fire and animals killed on the road, .....	80 00
Office expenses, stationery and printing, supplied in common with Troy & Boston R. R.	
Number of agents and clerks, 14, .....	4,605 53
Porters, watchmen and switchmen,.....	669 17
Conductors, baggagemen, and brakemen,.....	2,426 22
Enginemen and firemen,.....	2,613 43

## RECAPITULATION OF EXPENSES.

Maintaining roadway, .....	30,165 51
Repairs of machinery,—operated by machinery of Troy & Boston R. R.	
Operating,.....	19,191 63

## TABLE I.

## EARNINGS, RECEIPTS AND PAYMENTS.

*Earnings and Receipts.*

From passengers,.....	38,392 48
From freight,.....	45,020 39
From other sources,.....	6,600 00

*Receipts.*

From passengers,.....	38,392 48
From freight,.....	45,020 39
From other sources,.....	6,600 00

*Payment other than for construction.*

For transportation expenses, viz :

For passenger and freight business,.....	49,357 14
For rents,.....	84,178 81

## VALUE OF MATERIALS ON HAND.

No materials on hand belonging to this road.

## DETAILS OF EARNINGS FOR THE ELEVEN MONTHS ENDING AUG. 31, 1860.

SOURCE.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.	FEBRUARY.
Through passengers,.....		1.803 28	1.061 92	930 84	1.701 88	1.629 53
Way passengers,.....		2.471 70	1.836 71	1.592 63	1.116 30	1.186 06
Through freight,..... }						
Way freight,.....		4.564 56	4.633 09	3.595 07	2.398 70	2.853 63
Express,.....						
Transport of mails,.....						
Use of engines,.....						
Use of cars,.....						
Rent,.....						
Miscellaneous,.....						
Total,.....						

## DETAILS OF EARNINGS, CONTINUED.

SOURCE.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.
Through passengers,....	1.973 13	1.636 11	1.916 22	1.968 28	2.456 25	3.398 43
Way passengers,....	1.421 26	1.556 11	1.188 77	1.443 94	1.558 56	2.544 57
Through freight,.....						
Way freight,.....	4.060 95	5.064 95	4.780 61	4.204 81	4.616 59	4.247 43
Express,.....	1.200	per annum.				
Transport of mails,.....	5.400	per annum.				
Use of cars,.....						
Tolls,.....						
Miscellaneous,.....						
Rent,.....						
Total,.....						



## TABLE J.

## ACCIDENTS.

On the 14th day of July, 1860, an engine was thrown from the track near East Dorset, by obstructions placed thereon by some person unknown. No one injured.

## TABLE K.

## NUMBER OF EMPLOYEES AND COMPENSATION.

16 Agents, average,.....	\$26 00	per month.
2 Conductors, each .....	50 00	" "
4 Baggage-men and brakemen, .....	30 00	" "
3 Engineers,.....	60 00	" "
3 Firemen,.....	30 00	" "
4 Blacksmiths and Watchmen,.....	32 50	" "
10 Section foremen,.....	32 50	" "
60 Trackmen,.....	22 10	" "
6 Bridgemen,.....	40 00	" "

## OFFICERS OF THE COMPANY.

Officers of the Troy & Boston Railroad, whose salaries are included in the report of that road.

STATE OF NEW YORK, } Isaac V. Baker, Superintendent,  
 RENSSELAER COUNTY, ss. } and Edward Wilson, Chief Clerk,  
 depose and say that the facts set forth, and the statements made  
 in the foregoing report, which has been signed by them are true  
 according to the best of their knowledge, information and belief.

ISAAC V. BAKER,  
 EDWARD WILSON.

Subscribed and sworn to before me this 20th day of October,  
 1860.

W. T. WILLARD, *Gom. of Deeds*,  
 City of Troy, N. Y.

### **ERRATUM.**

Page 19, in last line under Table E., words in parenthesis should be omitted, and for 568,272 read 596,072, and the note appended is a mistake in copy.

# INDEX.

---

Report of Commissioner, .....	page 3
List of Railroads required to make reports,.....	16
List of Railroads with date of receipt of report,.....	16
Railroads in the State, length of,....	17
"        "        "    total cost of,.....	17
Summary from reports,....	18
Documents.....	21
Form prescribed for reports,.....	21
Copy of letter addressed to the Railroad Companies,.....	32
Annual Report of the Atlantic & St. Lawrence Railroad,..	33
"        "        Connecticut & Passumpsic Rivers,.....	39
"        "        Rutland & Washington,.....	50
"        "        Rutland & Burlington,...	59
"        "        Rutland & Whitehall,.....	71
"        "        Vermont Central, .....	74
"        "        Vermont & Canada,....	86
"        "        Vermont Valley, .....	89
"        "        Vermont & Massachusetts,.....	100
"        "        Western Vermont,.....	112
"        "        "        "        for 1860,....	127
"        "        Southern Vermont,.....	120
Description and advantages of various Chairs,.....	121
Safety switches, .....	124
Table of Earnings and Expenses, &c., of certain roads for six years,.....	125
Expenses per mile of road,....	126
Ratio of Expenses to Earnings,.....	126

4400  
2

8  
16  
16  
17  
17  
18  
21  
21  
32  
15  
9  
7  
1











